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Original Articles.

SYPHILIS OF THE NERVOUS SYSTEM AND THE USE AND ABUSE OF MERCURY AND IODIN IN ITS TREATMENT.*

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Syphilis of the nervous system and its treatment is a subject of such magnitude and universal importance that it can not be satisfactorily dealt with in a brief discourse. My remarks will therefore be confined more particularly to intracranial syphilis, this being the commonest type of the disease with which we have to deal.

Syphilis is one of the most frequent infectious causes of organic nervous disease. Hence, in every patient who appears with symptoms of disease affecting the nervous system, we must ascertain, if possible, whether he has ever contracted syphilis. This is comparatively difficult with women patients. In every doubtful case we are forced to depend on the existence or non-existence of somatic signs of the disease, the collateral symptomatology, and the character and course of the nervous manifestations. When it is discovered that syphilis has been acquired at some more or less remote period, it does not necessarily imply that every morbid condition of the nervous system which develops in the subsequent course of life should be at once attributed to this early infection.

Although such an individual is more apt to develop nervous syphilis, he is in no sense exempt from other (non-syphilitic) nervous disorders.

On the other hand, there are certain rather characteristic symptoms occurring in connection with lesions of the nervous system, which are unmistakably traceable, in almost every instance, to a previous or existing syphilitic process. If the disturbance is evidently of a luetic nature, it does not logically follow that the prognosis is favorable even under the best management.

When confronted with a disease of the nervous system in which the etiology seems obscure on account of the absence of a previous luetic infection, the physician has frequently expressed his conviction to the patient, that the presence of an antecedent syphilis would simplify the treatment, and thereby insure a favorable result. This erroneous idea has unfortunately become more or less prevalent, not only among physicians but likewise among laymen. Such an optimistic view is unjustifiable, and frequently leads to disappointment. It is usually based upon a mistaken conception of the pathology of the disease, or a credulous adherence to ancient and traditional doctrines.

The large majority of clinicians agree that thorough treatment in the early period after infection is the most efficient means of protection at our command, and that those who are either inadequately treated, or not treated at all, form the greater contingent of the class who pass into the so-called tertiary stages. This view represents the consensus of opinion of many reliable observers, and is based on an overwhelming mass of statistic material collected in all civilized countries.

In spite of this, several observers assume a heterodox attitude, in stating that recently acquired syphilis, whether thoroughly treated or not, uniformly passes into the tertiary stages of the disease. No matter how much polemic argument is indulged in on this point, we are forced to acknowledge from practical clinical experience, that patients in whom a thorough and systematic antiluetic treatment was carried out during the early stage following the primary infection, are not insured thereby against subsequent syphilitic disease of the nervous system. In these patients, however, it would seem that the symptoms appear in a milder form as compared with those who had never received suitable early treatment.

That the so-called degenerative types affecting the cerebrospinal system often appear in spite of vigorous early treatment is too well known to be denied. It will thus be seen that we possess no sure remedy which will protect the nervous system against its ravages when syphilis has once been acquired.

It is a remarkable fact, familiar to all neurologists, that in many patients whom we see with unmistakable signs of nervous syphilis, the primary infection has not been followed by any recognized secondary symptoms. Careful interrogation results in the information that there was an indurated chancre on the prepuce, with or without enlargement of the inguinal glands, and that is all. It is probable that a roseola was present but was overlooked. The absence of early treatment in these mild cases of acquired syphilis may account for the frequency of such conditions.

The syphilitic poison, when it invades the nervous system, affects it in several characteristic ways. 1. It may attack the intracranial or spinal arteries, producing an endarteritis, which gradually leads to thrombosis and occlusion of vessels, thus cutting off the blood-supply to the corresponding area. 2. It may give rise to a gummatous growth, or to a local or diffuse gummatous exudate, involving the meninges and infiltrating the adjacent brain structures. This specific inflammatory process may gradually press upon, or ultimately destroy by new tissue formation, conducting fibers or nerve-cells. 3. The nutrition of specially susceptible cell structure may be slowly interfered with, the cell substance and its processes undergoing gradual degeneration.

The first two forms are known as "inflammatory" or "exudative," and are usually more or less acute in their onset. They are not always late manifestations, for they often occur within the first two or three years, and may

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arise within a few months after infection. The latter has been characterized as "degenerative" or "post-" "para-" or "meta-syphilitic," and is essentially chronic.

The gummatous meningitic exudation most frequently attacks the base of the brain, involving the cranial nerves. The forms of brain syphilis most dangerous to life are: 1. That which attacks the cerebral arteries, producing obliterative endarteries. 2. Basal meningitis and meningo-encephalitis extending to the posterior fossa.

While it is virtually admitted that syphilis is an incurable constitutional disease, paradoxic as it may seem, it is the most amenable to treatment under certain conditions. The fact should be well understood by all, that while many of the effects of the disease are thus amenable, there is no method known at the present time by which we can eradicate the virus or its toxins from the system, and be enabled to say positively that the patient will remain free from further attacks. The *materies morbi* remains latent for years, unexpectedly manifesting its potency through some unknown exciting cause.

A clear comprehension and appreciation of the following important facts, which will bear repetition for the purpose of emphasis, may be the means of saving many a patient from useless, if not dangerous, medication.

1. Syphilitic inflammation produces more or less exudation, which terminates in the formation of connective tissue. Should this fibrous tissue entangle nerve-cells or fibers in its meshes they may be permanently destroyed. The symptoms that result from this interference with innervation or conductivity, when they have persisted for months or years in spite of active measures, are those that prove unamenable to further antisyphilitic or any other form of treatment.

2. When a cerebral artery becomes the seat of thrombosis, and this is most frequently the middle cerebral or its branches, whether such obstruction be superinduced by syphilitic endarteritis, atheroma or otherwise, the immediate results are similar. The interference with the nutrition of the corresponding cerebral area is shown by either partial or complete loss of physiologic function. The degree of the disturbance depends, *a*, on the size of the vessel involved, and the extent of structure which it supplies; *b*, its partial or complete occlusion. When the caliber of a small vessel is obstructed or obliterated, there may be some restitution of function through the early establishment of a collateral circulation. This does not occur, however, when a large artery becomes closed. The result of this cutting off of the blood-supply is necrotic softening. This dead brain-tissue can not be restored by antisyphilitic treatment. In many of the patients in whom occur transient monoplegia or hemiplegia, or aphasia, or attacks of petit mal or other loss of consciousness, these symptoms are occasioned by beginning thrombosis of cerebral blood-vessels. The distinction should be made in every instance, between those due to simple atheroma and those due to syphilitic endarteritis.

3. Cerebral hemorrhage of the familiar form, destroying the motor fibers of the internal capsule, may be the result of the rupture of a syphilitic artery. This is of much rarer occurrence than thrombosis. It is the hemorrhage that has done this damage mechanically, and the resulting paralysis can no more be correctly termed "syphilitic hemiplegia" than the hemiplegia resulting from necrotic softening in the same location. In both instances, certainly, syphilis is recognized as the remote cause, but the destruction of this portion of the motor tract is irremediable, and can not be modified by the use of antisphyilitic remedies.

I have thus endeavored to show that such residual symptoms indirectly due to syphlis can not be favorably influenced by antisyphilitic treatment, or by any other measures at our command. It is not only useless, but harmful, to persist in giving such patients either mercury or iodid of potash for an indefinite time, with such an object in view.

We must, therefore, direct our attention to the removal of the specific process itself, and in this accomplishment often lies one of our most brilliant therapeutic achievements. Recent exudative inflammation, gummatous growths, gummatous meningitis and meningo-encephalitis, pachymeningitis, obliterative endarteritis and periarteritis are *the* conditions which are most amenable to antisyphilitic treatment. It is not sufficiently recognized that there are extreme variations in the natural character and course of the disease. In some, it is brief and the symptoms disappear spontaneously. In others, it is extremely virulent, and there is a tendency to frequent recurrence, which may or may not be influenced by treatment. As individuals differ in personality, constitution, idiosyncrasy, etc., so does the activity of the syphilitic poison and the reaction to treatment vary in different individuals. The same is true in regard to all other infectious diseases. Much satisfaction will be gained by the knowledge that, in general, the good results of antisyphilitic treatment are shown early in the first or second week, improvement being at times marvelously rapid. Occasionally it takes from two to six weeks before improvement begins.

The rapidity of relief depends on several important factors: 1. The virulence of the disease. 2. The duration and character of the symptoms. 3. The susceptibility of the patient to the action of mercury and iodin.

The only drugs known to possess a specific influence on the disease and its pathologic products are mercury and iodin. The customary and preferable method of administering mercury is by daily inunction, until some of the familiar signs of mercurialization are manifested. The time required for this effect may be from a few days to two or three weeks. In rare cases, where a more rapid action is desired, we may resort to subcutaneous injections of calomel or bichlorid. Iodin, in the form of iodid of potassium, is given in saturated solution, usually beginning with ten minims three times a day, well diluted, and the dose gradually increased daily to the point of intolerance. Some patients can take with benefit, and without discomfort, as much as two or three drams or more, three tmes a day. It has always seemed to me that the iodid is quicker in its action than mercury, the alarming symptoms of cerebral syphilis sometimes disappearing like magic under its use. As a rule, it has been my custom to begin with mercurial inunctions, followed by increasing doses of iodid of potassium. When a rapid effect is required, the iodid is given in conjunction with the mercurial treatment. The duration of treatment with iodid of potassium varies with the individual patient. Generally speaking, its use should be continued until all active symptoms have subsided. Two or three months, however, is about the average length of time. Early, energetic and persistent treatment should be the rule: the earlier the better. Much harm may be done to the general health by the excessive, prolonged and injudicious use of these remedies. As a special illustration, I may mention that primary optic nerve atrophy progresses more rapidly to complete blindness under the protracted use of mercury.

The choice of preparation, the method of administra-

tion, and the dosage should be governed by the exigencies of the case and the judgment of the attending physician. For further details I must refer to the various modern text-books on this subject.

The syphilitic virus, like the virus of other infectious diseases, by diminishing the resistance, i. e., the vitality of the cell, more readily predisposes the patient to degeneration in the nervous system. It is this broad principle which should guide us in the general management of every case, whether it be of the degenerative or the exudative variety. We should, therefore, invariably institute a suitable tonic régime, in conjunction with and following the specific medication.

Tonic measures, such as nutritious food, baths, massage, electricity, and all other means directed toward improving the general health, must not be considered simply as adjuvants, but as constituting a most important therapeutic element, and continued as long as necessary.

As a prophylactic against recurrence, moderate doses of iodid should be administered daily for several weeks, three or four times a year, and the general health conserved as much as possible. In no other affection of the nervous system is a comprehensive knowledge of neurology more essential, our measure of success in the treatment depending on the early recognition of the cause of the symptoms.

When the diagnosis of syphilitic disease is doubtful, too much dependence should not be placed on the so-called therapeutic test, or, as it is frequently termed, the diagnosis *ex juvantibus*. While it possesses at times a certain value, it is more often unreliable, for we all know that mercury influences simple as well as syphilitic inflammation, and that iodin also promotes the absorption of non-syphilitic inflammatory products. On the other hand, the presence of syphilis can not be positively excluded when improvement *fails* to follow the administration of these remedies.

In this connection, the following illustrative and characteristic case will prove interesting in demonstrating many of the points above mentioned:

L. T., 32 years of age, born in the United States, was first seen by me Oct. 21, 1897. She was married sixteen years ago, and has one child, now 15 years old, in perfect health; no miscarriages. She has been separated from her husband for ten years, owing to his dissolute character. She was well until five years ago, when she began to have pain in the course of the left sciatic nerve. During this period there were occasional intervals of freedom from pain, the longest being three months. About a year ago, without any previous injury, large ulcers developed on both legs, which were slowly healed after prolonged treatment. Three months ago she was attacked by severe paroxysmal general headache about every half hour. Sometimes it was almost continuous day and night. This was accompanied by failing vision. During the last four weeks there has been persistent and continuous pain on the left side of the face and in the left eyeball. This was associated with frequent, sudden, and apparently causeless vomiting. She also complained of diplopia, somnolence, general weakness and extreme sensitiveness to cold. There was no history of primary syphilitic infection, alcoholism, or injury to the head. The menstrual function was regular. The bowels are always constipated. During the last four weeks she has been under medical treatment for trigeminal neuralgia and has taken antineuralgic remedies galore without relief.

The patient, who was accompanied by her mother, appeared in dire distress, with her head almost completely enveloped in several large wraps, her eyes only being partly exposed. She moaned most of the time, frequently uttering a sudden agonizing shriek. She was admitted to the hospital, under my care, for further examination and treatment.

On admission, the pulse was 76 and regular; temperature and respirations normal. The heart, lungs and abdominal organs showed no evidence of disease. There was considerable mental hebetude and somnolence. She suffered from paroxysms of intense pain, affecting the two upper branches of the left trigeminus distribution, and the frontal region on both sides. The scalp was hyperesthetic, especially on the left side. There was tenderness on pressure over the spinous processes of all the cervical vertebræ, but no rigidity of the neck muscles. Slight convergence of left eyeball was evident, as a result of paresis of the external rectus muscle, which required a prism of 30° to overcome the diplopia. The pupils were unequal, the right measuring 5 mm. and rigid; the left 3 mm., but reacting well to light, although there was no reaction consensually or in efforts at convergence. Vision: R. E. =20/30—; L. E. = 20/30—.

There was "choked disc" of 3 D. in the left eye, and receding papillitis in the right. Right homonymous hemianopsia was present, and right facial paralysis, affecting only the lower branches. The tongue protruded well, but deviated slightly toward the right. There was no objective sensory disturbance in the course of the fifth nerve. Hearing and sense of smell were normal. There was right hemiparesis, with exaggeration of all reflexes and ankle-clonus on the same side; left side normal; no sensory disturbance. There were marks of old ulceration over the calf muscles on both sides. Examination of the urine was negative.

Diagnosis.—Syphiloma, involving the left crus, destroying the left optic tract, and making pressure on the pyramidal fibers, and the fifth and sixth nerves, on the same side.

She was given a large enema and 5 grains of calomel, which proved effective in relieving the constipation. In addition to general management, mercurial inunctions were begun at once and continued twice daily, in conjunction with increasing doses of iodid of potassium, beginning with 12 gr. three times a day.

Within three or four days, the vomiting, pain, and hebetude began to subside, and gradually disappeared a few days later. She remained in the hospital two weeks. During this time the pulse, temperature and respirations were normal. The mercury was discontinued at the end of three weeks, the iodid being given for ten weeks longer, the maximum dose being 70 gr. t. i. d. The optic neuritis, and the paralytic symptoms had entirely disappeared at the end of five weeks, the pupilary rigidity and the hemianopsia remaining unchanged.

She has been under my observation from time to time during the last two years, and there has been no recurrence.

At the last examination, made Nov. 20, 1899—over two years since her illness—it was noted that she was in perfect health. The left pupil did not react to light, and vision was: R. = 20/20; L. = 20/20; and the hemianopsia was still present.

It will be observed that all of the active symptoms disappeared rapidly under treatment, while the residual symptoms, such as the loss of pupilary reflex and the hemianopsia have remained permanent.

It has been said that there is no form of syphilitic

nervous disease which should exclude "specific" treatment. From such a misleading statement, it would be inferred that mercury and iodin are also beneficial in all cases of the so-called parasyphilitic affections, among which have been included a large percentage of cases of tabes, paretic dementia and progressive ophthalmoplegia. As previously mentioned, these diseases are degenerative in character.

When uncomplicated by a specific inflammatory process, they are not benefited by such treatment. One difficulty in this matter lies in the possibility of mistaking cases of exudative cerebrospinal syphilis for true tabes, i. e., an inflammatory for a degenerative condition. I speak of tabes because it is the most common and representative type assumed to belong in this category. When such a differentiation is not clear, or is impossible, the patient should be given the benefit of any reasonable doubt, and these drugs administered.

What I wish to emphasize is that patients with tabes, for instance, who have had syphilis, but have never received antiluetic treatment since their tabetic symptoms have occurred, should be given a course of active medication for several weeks. If this has already been carried out without relief, it is useless, nay, even harmful, to repeat the procedure. Not only have I never seen such patients improved by this means, but I have repeatedly noted an increase in the degree of many of the symptoms, presumably as a result of interference with the general nutrition. For several years many writers have endeavored to prove, by a formidable array of statistics, that "syphilis is *the* cause of tabes," and that "without syphilis there would be no tabes." It is to be deplored that the majority of practitioners, in blindly following this extravagant dogma, look on "tabes" and "syphilis" as almost synonomous terms, their consecutive thoughts on this subject when expressed laconically being locomotor ataxia, syphilis, mercury and iodid of potassium. Among many others, I must still maintain the opinion that tabes is *not always* due to syphilis, and that many cogent reasons are forthcoming which will sustain this view.

With the positive knowledge of an antecedent syphilis, we are by no means certain that these degenerative diseases are always the result of such early infection. From careful observation in a large number of cases, it has always seemed to me that there are additional causative factors, such as alcoholic, sexual or other excesses, or a congenital or acquired neuropathic constitution, which favor the development of degenerative processes in the nervous system, even in those patients who have contracted syphilis at some remote period. But this is neither the time nor place for the exploitation of the facts bearing upon this interesting and important topic. Let us all look forward with the hope that rapid advance in the modern methods of bacteriologic research will be the means of discovering the specific germ of syphilis, and its antitoxin, and thus prove the salvation of humanity from one of the greatest scourges of civilization. At the present time, then, the prevention of syphilis is practically an unsolved problem. For men may come and men may go, but syphilis goes on forever.

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DISCUSSION.

DR. EDWARD D. FISHER said that cases of nervous syphilis yielded the best results under antisyphilitic treatment when the process was a rather acute one. Thus, in pseudogeneral paresis, and in cases of rapidly developed paralysis of the ocular muscles, occurring independently of rheumatism, one might expect satisfactory, and sometimes even brilliant, results from specific medication. Spinal syphilis is often confounded with tabes, though usually easily differentiated by remembering that tabes is never so rapid in its development. He would recommend a trial of antisyphilitic remedies in all cases of tabes characterized by sudden exacerbations, as such fluctuations are generally regarded as evidence of fresh gummatous infiltrations.

DR. EDWARD G. JANEWAY cited several cases in illustration of the importance of the physician endeavoring, in cases of cerebral syphilis, to determine both the nature and the site of the lesion. Thus, in a case diagnosed by an eminent neurologist as one of tumor of the brain, no new growth was discovered at operation, and the autopsy showed instead a syphilitic hyperostosis of the skull. It is well to remember that in cases exhibiting a peculiar intolerance to iodid of potassium, iodid of sodium or of strontium may be better borne, and if these also fail, excellent results may still be achieved by giving iodid of potassium by the rectum. The diagnostician should bear in mind the liability of mistaking a persistent fever, coming on in tertiary syphilis, for tuberculosis. Regarding the relation of syphilis to tabes and general paresis, the speaker stated it to be his firm conviction that, in the great majority of instances, these diseases are of syphilitic origin, and he, therefore, advised in doubtful cases, a resort to the therapeutic test, claiming that it is fully justified by the circumstances.

DR. CHARLES I. PROBEN thought one could not reasonably expect much benefit from antisyphilitic treatment in cases of the degenerative type. Sometimes iodid caused marked emaciation and when this was observed, the dose should be reduced, or the drug entirely discontinued. This reduction in the body weight is especially noticeable in persons suffering from tuberculosis.

DR. BOLESLAW LAPOWSKI favored the use of mercury in the metallic form, as this imposes the least work on the system. It is his practice to use mercurial inunctions whenever possible, with due attention to the state of the kidneys and their ability to eliminate the mercury. In cases of such urgency that even mercurial inunctions are too slow and uncertain, he would be willing to employ calomel injections, or even the admittedly dangerous method of administering sublimate by intravenous injection.

DR. H. M. LESZYNSKY, closing the discussion, took issue with Dr. Fisher regarding the harmlessness of the iodid, claiming that it not only interferes with the nutrition of the individual, when continued for too long a time, but renders the patient less susceptible to its action, so that in the event of the development of new and urgent complications, the physician would be unable to stay the progress of the disease. Moreover, it has seemed to him occasionally that he had actually hastened connective tissue formation by giving iodid.

EVIDENCES THAT BOVINE TUBERCULOSIS IS COMMUNICABLE TO MAN BY DIRECT CONTACT, OR BY FOOD INFECTION.*

BY JOHN A. ROBISON, A.M., M.D.

CHICAGO.

During the past two years the subject of the cause and prevention of tuberculosis has occupied the attention of the medical and lay public, and the medical journals and newspapers have been teeming with literature on the subject. The possibility of man deriving the infection from cows has been emphasized and reiterated until the public is frightened, our boards of health are advocating stringent methods for the extermination of bovine tuberculosis, and our legislatures are considering the passage of strict laws to this end, the regulation of dairies and the sale of tuberculous flesh and milk. The main proposition seems to be that bovine tuberculosis is one of the principal causes of the spread of tuberculosis among

*Presidential Address to the Chicago Society of Internal Medicine, delivered Oct. 31, 1899.

man; eradicate it, and you prevent its spread among the human species.

Considerable yellow literature has been issued on this subject, and I wish to review the arguments in favor of and against the proposition, and quote freely from authorities on both sides of the question.

What are the evidences in favor of the belief? Those who favor this base their faith on the following reasons: 1, the identity of the pathology of tuberculosis in cattle and man; 2, the similarity of the bacilli of the respective tuberculoses as observed under the microscope, their growth in the various culture-media, and the identity of their biologic characteristics; 3, the behavior of animals infected with cultures from the respective sources; 4, the reaction of tuberculin on cattle and the human subject, and, 5, statistical evidence of its production in the human subject by direct contact with infected animals, or by the ingestion of tuberculous flesh or milk, and the alleged immunity of persons who are vegetarians, or at least who do not partake of tuberculous flesh.

As to the identity of the pathology of the disease in the respective species, man and cattle, bovine tuberculosis has long been known to present pathologic similarities to the appearances found in the tuberculosis of man, the distinctions being that the tubercles of bovine origin are located by preference in the serous membranes, and consist of giant cells in a coarse reticulum, with less tendency to cheesy degeneration or calcification than in the human subject. In 1865, Villemin proved that tuberculosis might be induced in animals by inoculation, this proving being corroborated in 1877 by Cohnheim. The pathologic appearances in the inoculated tuberculoses being almost identical with the spontaneous forms of the disease, it was easy to argue that the same bacillus doubtless caused the disease in all species of mammalia, and it was only one step further to argue that if the disease can be transmitted from the human subject to other species, it is possible for the former to be infected by another animal.

Later experiments demonstrated the fact that tuberculosis could be induced in animals fed with tuberculous food. If this is true, why should not the converse be true, and the human be susceptible to the disease through contaminated food? The argument was brought forward, after it was demonstrated that the bacillus could be found in the milk of tuberculous cows, that the frightful infant mortality from tuberculous diseases must be due to the inoculation of children through the food. The hospital records showed that about 40 per cent. of deaths in infants was due to tuberculous diseases. These were supposed to be due in a large measure to the fact that infection gained entrance through the digestive tract.

As to the second reason, the identity of the bacilli in the various forms of tuberculosis as found in the different animals, fowls and fish, it has been only recently that a belief has grown that there may be various forms of bacilli producing the various forms of tuberculosis, instead of the various tuberculoses being manifestations of the same bacillus under different environments. Koch himself did not stop to clear up the question; and the profession was so impressed with his brilliant discovery that it did not try to answer the query, but later we will try to demonstrate that the morphology and biology of the various bacilli are not identical according to the most recent light on the subject. The behavior of animals infected by cultures from various sources was thought to be the same, but to this point we will later call your attention.

When Koch's tuberculin was presented to the world, it was hoped an efficient agent had been found to combat the ravages of consumption, but we have found we must be content with its value in diagnosis. It is now acknowledged to be of great value in the diagnosis of bovine tuberculosis, and of less utility in that of obscure cases of tuberculosis in man. However, its reaction in man and animal being so nearly identical, has led many to believe that the use of tuberculin is a powerful argument in favor of the identity of the various forms of tuberculosis.

Lastly, we come to the statistical part of the argument. A long array of statistics seems to prove the great danger which exists in the transmission of the disease from animals to man when he is brought in direct contact with the diseased animals, or partakes of the food from these animals. That not only the laymen, but our state officials, are imbued with this doctrine is illustrated in the following extract from the report of the Live Stock Commissioners for 1895: "In tuberculosis, either in animals or man, the specific germ, the bacillus tuberculosis, is always found, and this can be artificially transmitted by introducing this germ into the blood of the healthy individual. It is thus that tuberculosis has gained such a fearful hold upon mankind and our domestic animals, by contact with the germs from a previously affected person or animal, or by using the milk or flesh from a diseased animal."

The United States Veterinary Medical Association met in Chicago in 1893, and the report of its Committee on Diseases has the following: "Tuberculosis, so common in the thickly settled parts of this country, is readily diagnosed to-day, and, with these centers of infection eradicated, there will undoubtedly be a marked difference in the death-rate of mankind."

Dr. James Law, V. S., of Ithaca, N. Y., in an address before the United States Veterinary Medical Association, in 1898, on the "Dangers to Mankind from the Consumption of the Flesh and Milk of Tuberculous Animals," says: 1. The bacillus tuberculosis, from whatever animal derived, has a similar, apparently an almost identical, morphology. 2. All alike have peculiar staining properties, which distinguish them from all other pathogenic organisms except the bacillus lepræ and the smegma bacillus, the lesions of which can not be confounded with tubercle. 3. Its viability and destructibility; its thermal death point; its destruction by light; its survival of drying, freezing and putrefaction; its propagation through dust, agree, no matter from which source obtained. 4. In the general susceptibility of a great number of genera of animals to the inoculated germ, and in the special susceptibility of the common experimental animals, like rodents, to the germ as derived from different animal sources, we have another strong evidence of an essential unity. 5. In the usual seats of election for the propagation of the bacillus in the bodies of different animals, and irrespective of the animal from which the virus was drawn, we find another indication of primary and essential identity. The preference of tubercles for the lymph glands, lymph plexuses and lymph sacs or serous membranes is a characteristic that need not be specially insisted on. 6. The close similarity of the lesions caused in different animals by the bacilli drawn from the different genera bespeak an essential identity. 7. In all forms of the disease, and from whatever source the bacillus may have been derived, there is the same tendency to a slow evolution of the morbid lesion. 8. The bacillus tuberculosis from any genus of animals demands for its artificial culture a special culture-medium, glycerined or glucosed as the

case may be, while it refuses to grow readily on the common culture-media of the laboratory. 9. The bacillus drawn from any genus of tuberculous animal grows with remarkable tardiness, and does not attain a full development until at the end of about two months. 10. The culture-medium of the bacillus from any genus of animal, whether man, ox or bird, becomes charged with those products, which are collectively known as tuberculin, and to all cases alike these act on the tuberculous system in the same way, causing hyperthermia and other nervous disorders. It matters little whether the bouillon had been seeded from the tubercle of man, ox, bird, ape or bear, the resuting tuberculin can be used with confidence in testing for tuberculosis, in any animal.

The establishing of these facts should be sufficient to prove the unity of the germ. As corroborative proof, this author submits a list of cases of accidental infection of man from the ox. In only one of this list did the victim die of pulmonary tuberculosis where the infection was supposed to be due to direct contact with a diseased animal. He records twenty cases of ingestion infection, also, in which generalized tuberculous infection ensued. Shakespeare, Osler and other prominent physicians are quoted as remarking on the prevalence of intestinal and mesenteric tuberculosis in children as the result of vitiated food-supply, while Comby is stated to have shown[1] that tuberculosis of the intestines and tabes mesenterica are diseases occurring especially between early and late childhood, between two and five years. Dr. Law then argues for the intertransmission of tuberculosis between cattle and men by the geographic distribution of the respective forms of tuberculosis being similar. In the Scottish Hebrides, Iceland, Newfoundland, coasts of Hudson Bay, Norway, Sweden, Lapland, Finland, the Pacific Islands, the Kirghiz Steppes, Colombia, Ecuador and the interior of the Argentine Republic, it is claimed tuberculosis is rare on account of the scarcity of cattle. Formerly it was seldom found in Australia, Tasmania, Minnesota and Dakota and among the North American Indians, until cattle were introduced; since then the disease has rapidly spread. In China and Japan it is seldom found among the poorer classes, who live chiefly on rice, while among the mandarins and the aristocrats it is prevalent because they are beef-eaters.

Hirschberger declares that 25 per cent. of all the children dying under 1 year of age, die of tuberculosis. J. Burden Sanderson says 40 per cent. of the hospital cases are tubercular. Von Wesner, Fischer, Baumgarten, Bollinger, Johne, Martin and scores of our American observers come to similar conclusions. These observers believe the infection is due principally to the use of infected milk, as they are not convinced that the danger is great from the use of tuberculous flesh.

Let us look at the opposite side of this question. First, as to the identity of the bacillus found in bovine and human tuberculosis.

Dr. Theobald Smith[2] has made a comparative study of bovine tubercle bacilli and of human bacilli from sputum. In this seven sputum and six bovine cultures were used, also one animal culture presumably from sputum, and one each from the horse, the cat and the pig. His results may be summarized as follows: *Morphologic and biologic characters*—1. Bovine and other animal bacilli grew less vigorously for a number of generations than the sputum bacilli. 2. Bovine bacilli are much less influenced by certain modifications of the culture-medium. 3. Bovine bacilli tend to remain short; human bacilli are either more slender from the start or become so during the cultivation. *Pathogenesis:* Bovine are more virulent than the human bacilli; the lesions they produce are more grave and more bacilli are found in them. As to the intertransmissibility of the two forms of the disease, Dr. Smith lays down two propositions: 1. The sputum bacillus is incapable of finding a foothold in the bovine body. 2. The bovine bacillus may pass to the human subject on account of its higher pathogenic power. He states that the second proposition has been discussed for many years, without bringing us any nearer to any definite knowledge, but after reviewing some of the supposed cases of infection of man from cattle, he remarks: "If bovine bacilli may invade the human body without let or hindrance, we have not only food infection through milk and products to guard against, but also the inhalation disease to which men are exposed in stables containing tuberculous cattle. What proportion of tuberculous subjects derive their infection from these sources we do not know. Now that we have established some fairly pronounced differences between the bovine and sputum bacilli, the whole discussion might be cut short by the suggestion that the time has come to stop citing old and doubtful cases and go to work to study with care the tubercle bacilli from cases of supposed animal origin, so that some experimental, trustworthy basis may be formed upon which to found statistics. In the meantime the relation of bovine to human tuberculosis must be somehow defined before a fairly helpless and frightened public. It seems to me that, accepting the clinical evidence on hand, bovine tuberculosis *may* be transmitted to children when the body is overpowered by large numbers of bacilli, as in udder tuberculosis, or when certain unknown favorable conditions exist. To prevent this from occurring, a rigid periodic dairy inspection and the removal of all suspicious udder infections and all emaciated animals is as much as public health authorities can at present demand."

Smith says the accumulated evidence of bacteriology is opposed to the view that the bovine bacillus may enter the human body and change into the sputum variety of bacillus, but the question of pulmonary phthisis being secondary to infection by the digestive tract is one which must be studied more scientifically in the future. Tubercle bacilli tend to gravitate toward the lungs, no matter by what portal they enter the body. In closing, he says the main questions to be studied are: 1. The study of tubercle bacilli from different types of tuberculosis to determine their relation to the sputum bacillus and the bovine bacillus as regards their virulence. 2. The study of the bacilli in primary intestinal disease and in all tubercular disease in children, where the source of infection is assumed to be outside of the family and possibly in the milk.

While the value of tuberculin as a diagnostic agent in bovine tuberculosis seems to be well established, it is not so clearly shown in human tuberculosis. Dr. Edward O. Otis, Boston, is one of the most enthusiastic advocates of tuberculin for this purpose, and summarizes his observations in cases as follows: 1. The tuberculin test indicates early tuberculosis by a general reaction before it can be detected by other means, except the X-ray, in the large majority of cases, with a dose of from 5 to 10 mg. of Koch's original tuberculin. . . . 2. Proved tuberculosis in a more or less advanced stage may fail to give the reaction from doses of 10 to 12 mg. 3. Syphilis gives the reaction in an undetermined proportion of cases. 4. There is a dose, undetermined, at which a non-tuberculous person may react or simulate a reaction. Therefore, we must admit that the reliability of the tuberculin test is not proven to be equally accurate in

bovine and human tuberculosis. Accordingly, we will pass this point to the consideration of the statistical evidence of the transmission of the disease by direct contact with diseased animals, or the use of food products from such diseased animals.

In the diagnosis of tuberculosis in children it must be acknowledged that it is difficult to prove the route of the infection. Dr. George F. Still[3] opposes the common theory that the frightful mortality among children from tuberculosis is from intestinal infection. He found that in 89 autopsies of children under 3 years of age, 63 appeared to have been originally infected through the lung, and 26 through the intestine, while in 91 between 3 and 12, the pulmonary infection was apparently prior in 55, and that of the intestines in 36. The conclusion must be that the infection by inhalation is more to be dreaded than from food. The apparent danger of infection through the food may lead to the neglect of preventing infection through the air.

I quote freely from a paper by Edward Moore, V. S., Albany, N. Y., who forcibly and graphically opposes the theory of the transmission of the disease from cattle to man. Speaking of the reported cases of direct infection of man by the ox, he says: "I have read of cases of accidental inoculation of the human from the bovine, and if they occur they must be rare, inasmuch as none have come under the writer's observation, and probably no one has had greater experience with tuberculosis in cattle. I am positive that many supposed cases have been incorrectly interpreted. Suppose one member of a family on a farm develops tuberculosis, and there are one or twenty tuberculous cows on said farm, it does not prove that the individual obtained the infection from the bovine. It is quite probable that he has been exposed to infection from human tuberculosis hundreds of times. Many reported cases hang on just such vague evidence as this. . . . Just as positively must we know that infection passes to the human adult or child from cow's milk or its products, or from beef, or through ingestion in other ways, or by inhalation of bacilli from the bovine, and that they alone establish the disease ere we can truthfully say there is such transmission. How may we know that a human being is tuberculous when no germs can be obtained from the subject, and no marked symptoms are observed? If an adult or child has tuberculosis, and it is proved that such patient has partaken of milk for any length of time from a cow known to be tuberculous, it is by no means certain that infection came from the cow unless there is proof that it did *not* come from the human, and that it did not exist prior to his ingestion of the milk. Let us take cognizance of the difficulty of establishing such a fact. Humanity wanders incessantly. The germs of human tuberculosis are wafted on the winds, are carried by the waters, may be brought home in food or clothing, may be inhaled at church, theater, or hotel, in motor or parlor cars. They do not stand out in large black masses, like the rocks the mariner is ever alert to avoid, but without our ken, noiseless, imperceptible and intangible they surround and invade us. They do not sting when they capture a victim; then how can we know the time, the place, and the source of infection? Even the milk from that tuberculous cow just mentioned may be further contaminated by bacilli from a human being before it reaches the consumer, and the bacilli from the human being may establish disease, while those from the cow prove inert. Consumption in people is so common that physicians have unlimited facilities to study its etiology. For instance, in New York State the deaths from this disease for eight years from 1888 to 1895 were 104,804, an average of 13,100 a year, and it averaged about 11 per cent. of all deaths. The annual report of our state board of health for 1896 says: 'Tuberculosis in some form or other accounts for a very large percentage of the deaths in the state, and when it is known that there is at the present time a large amount of meat consumed from tuberculous cattle, and that milk from such cattle enters into the dietary of the people, and that there is danger when the bacillus is ingested, it is believed to be a most potent source of infection, especially in children.' Note the expression, *believed to be*, and if we read from scores of writers on this subject we shall find that when they come to this point they all hide behind just such terms. Where are their facts, and why do they not give us some positive statements, with convincing illustrations of the methods by which they proved to themselves that such was the case? Too long have writers worn the thinking caps of others, too confidingly have they accepted the statements of supposed authorities. There has been too much heredity in ideas and quotations. Practically all the people of the State eat the products of cattle all their lives, and tuberculosis in cattle is well distributed throughout the State. Now, then, if the disease passes readily to man, even laymen should be able to note the fact where large numbers of cattle are infected. But they, and their physicians, and their veterinarians have merely presumed, imagined, believed, supposed, and concluded that such 'might be the case.' One thing is well known, viz., that 13,000 human consumptives give off enough infective material annually to account for all the human tuberculosis in the State without the aid of a single bovine. It is of less interest to physicians whether tuberculosis is transmitted from the human to the bovine; still, if the disease is intercommunicable, as we are assured it is, then it is equally important either way. I have not been able to learn of a case where the disease was established in a cow or a herd from human sputum.

Dr. Cooper Curtice says: "In 1897 I tested two hundred and forty cattle in the vicinity of Saranac Lake, N. Y. Every one there supposed that I would find tuberculosis in herds that fed in the fields where the consumptive patients that resort to this place take their exercise. Not one case was found. Not only this, but the herd of the sanitarium had been previously tested with like results.' If tuberculosis could be transferred to cattle from human beings, it should certainly occur at such a place as Saranac Lake, a sanitarium where thousands of consumptives resort. Thus, while feeding experiments may have been interpreted as showing in some instances that infection from human to bovine were possible, it seems very well established that the infection from man to cattle does not obtain when consumptive people and healthy animals occupy positions toward each other daily which are calculated to offer every opportunity for such transmission. . . . I will presently offer some practical evidence from the everyday lives of people who are constantly exposed to the infection from bovine tuberculosis. I know the cattle, know the percentage of diseased animals in herds, and have been aware of the existence of disease in the herds for from several to eighteen years. I have visited the people, dined with them when there was plenty of bovine bacilli on the table to satisfy any ordinary craving, and I have noted the health of those families, especially that of the children, many of them having all of their lives used the products of herds largely infected, and I have not yet discovered a single case of human consumption therefrom. It is axiomatic that if

transmission is common, or even possible, the farms where large numbers of infected cattle are kept are the places where the fact can be best observed; because nowhere else in the world is there so much infective material, nowhere else are the bacilli so potent, nowhere else are people so exposed to the danger, if any exists, and at these places feeding and inhalation experiments, so to speak, are constantly going on; and you will bear in mind that it is the mature cow that is oftenest affected, and it is from her that the largest amounts of milk, butter, etc., are used. A vast amount of work has been done by scientists to demonstrate whether milk from tuberculous cows whose udders were not diseased contained bacilli, and it may be conceded that it does in some cases; they are also present in milk frequently when such milk is obtained from tuberculous udders. Sternberg, in his "Manual of Bacteriology," says: 'A more common mode of infection, especially in children, is probably by way of the intestinal glands from the ingestion of milk from tuberculous cows. That infection may occur by way of the intestine has been proved by experiments upon rabbits, which developed tuberculosis when fed upon tuberculous sputum.' This is the sill in the doorway of investigation, over which many a bright man has fallen. It is assumed that the infant will do exactly that which rabbits and guinea-pigs have done. All the evidence I have thus far collected indicates that it does nothing of the kind. . . . What chances are there in cities for people to obtain infection from cattle, as compared to those just pictured in the country? Even the milk is most infective when freshly drawn from the cow, so far as bovine tuberculosis is concerned; the only way it can be more dangerous to people when served in cities and towns is through its contamination by bacilli from human consumptives. Yet your health laws all aim to protect the citizen; no one has ever suggested a law to protect farmers from infection by bovine tuberculosis. Again, the percentage of deaths from consumption is much higher in cities than in the country or in country towns."

Dr. Moore appends letters from a large number of veterinarians, herd owners and state veterinarian officials, none of whom admit having ever seen any evidence of tuberculosis being the result of using tuberculous milk. In closing he says: "If we have succeeded in purging the bovine of responsibility for human tuberculosis we have severed the relation supposed to exist and which gave origin to the title of this paper. People everywhere will feel relieved. Cattle-owners will vie with the cow-milk drinkers and the beef-eaters in their appreciation of the fact that their minds are now freed from the terrible menace that has heretofore haunted them. The cattle industry will receive new impetus. Physicians will have to educate consumptives to appreciate the necessary precautions they should take, nay, they must take, for the protection of their fellow beings, and healthy people must be made to understand in what ways tuberculous subjects are dangerous to them. The imperative need is for measures for the protection of human from human. Such education will cut down the death-rate more rapidly than medical treatment. The establishment of hospitals and retreats for the treatment and isolation of consumptives is the best step physicians have yet taken for the prevention of the spread of this disease."

In 1896 our able secretary, Dr. E. F. Wells, published a paper in which he proved by statistics, which I have every reason to believe trustworthy, that pulmonary tuberculosis is diminishing in prevalence. In New York, in 1805, there were 5.72 deaths per 1000 from tuberculosis, which ratio had decreased in 1894 to 3.29. In Baltimore, in 1815, the ratio was 4.10; in 1894, decreased to 2.71. In Philadelphia, in 1835, it was 3.52; in 1894, 2.65. In Providence, R. I., in the same year, it was 4.38; in 1894, 2.63. In England and Wales, in 1845, it was 2.77; in 1894, 1.65. In St. Louis, Mo., in 1845, it was 3.60; in 1894, 1.87. In Chicago, in 1845, it was 2.62; in 1894, 1.58.

These figures corroborate the observations of others, that tuberculosis is gradually decreasing in virulence, owing to the improved conditions of living.

Statistics show, on the other hand, that bovine tuberculosis is constantly increasing, and if they are markedly interdependent on each other, they should increase or decrease *pari passu*. The claim does not hold good, however, when we examine the statistics of countries where cattle are not afflicted with tuberculosis to any marked degree. In South Africa, human tuberculosis is extremely prevalent, but a royal commission[5] appointed to examine into the prevalence of bovine tuberculosis has reported that the herds are almost entirely free from the disease. The Gauchos in South America, who subsist almost entirely on beef, are remarkably free from tuberculosis. On the other hand, the Hindoos, who abstain from meats on religious grounds, are being decimated by tuberculous disease. It is the children of the affluent who consume more milk than the poorer children, and yet tabes mesenterica finds its victims largely among the latter class.

A wide review of the literature of the subject leads me to the following conclusions: That we have not sufficient evidence to teach positively the doctrine of the intertransmission of bovine and human tuberculosis by contagion or ingestion of tuberculous flesh, while we must admit there *may* be an element of danger in the use of tuberculous milk. This danger is sufficient to justify us in demanding such laws as will ensure the consumer pure milk, and pure food products, for esthetic if no other reasons. But until the exact degree of danger which attends the use of the milk of tuberculous cows is proven, it is better to teach the public that there are other predisposing and exciting causes of human tuberculosis which, if removed, would tend to eradicate the disease from the human race more rapidly than trying first to eradicate it from the domestic animals. In other words, while we do not attempt to conceal the possibility of the intertransmission of the disease, let this possibility be placed in its proper perspective.

Again, in our fight against tuberculosis, the profession and the public must be a unit. It would be unwise for us to antagonize the masses, as for instance the farmers. That will certainly be the result if we spread broadcast such doctrines as have been almost universally accepted in the past without having been scientifically demonstrated. There is open to us a field of investigation. Let this Society appoint a committee to investigate this question. We have, as members, expert bacteriologists, chemists, sanitarians, pediatrists and internalists, who are competent to grapple with this problem. Let such a committee work in harmony with similar committees from the Illinois Society for the Prevention of Consumption, the Board of Live Stock Commissioners, and the representative farmer associations, and demonstrate, if possible, to scientific exactness, the degree of danger that exists and the best possible ways to avoid the danger without working hardship to the owners of vitiated stock. At the same time, let the work of educating the public as to the best methods of preventing the spread

of tuberculosis among man be carried forward. I believe the best method of educating the public is through the media of home sanitaria. The education which patients get at these is spread broadcast when they return to their homes, for example is better than precept. I also believe we should have a state sanitarium where the consumptive poor of the state could receive the proper treatment, modeled perhaps after the Massachusetts State Sanitarium, where they receive treatment for fifty cents a day. There is already a movement in this direction. Last year, at my suggestion, Col. George C. Rankin, a member of the state legislature, introduced a resolution which authorized the State Board of Health to investigate the advisability of establishing a state sanitarium for consumptives, and report thereon to the Governor before Jan. 1, 1900. In accordance with the spirit of this resolution, a committee of the State Board of Health will report in favor of its establishment. Such an institution would do much to head off the free dispensaries for the treatment of consumptives, which tend only to pauperize the public, and are wholly inefficient as institutions for the treatment of tuberculosis. I would ask the members of this Society to co-operate in all the means which may be employed toward the establishing of a state sanitarium.

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DISCUSSION.

DR. J. M. PATTON—If the Doctor intends his remarks to emphasize his disbelief in the possibility of communication, then I would not agree with him, because the evidence of indirect communication, direct as far as conveying infection through the milk or meat is concerned, is too vast to admit of this belief. While there may be considerable doubt as to its extensiveness, it has an extent which well merits careful investigation. The establishing of some kind of an institution under the state or local government is certainly very timely. There is nothing that we are more in need of than some place of this kind, and there is nothing that brings out so forcibly the paucity of our public institutions as does this one thing. The indigent suffer mostly from tuberculosis, and they are the ones who seek these institutions. It is a crying shame for a civilization such as ours, that we should be without them. It is another question as to what form of government they should be under. The results obtained in the public sanitaria of this country, Canada and Europe fully justify the ground which the essayist has taken. The result in the public institution in Glasgow, one which is located in a climate which is decidedly not the best for tuberculosis, and where the average residence of each member is not over three months, and where the majority admitted are advanced cases, shows very forcibly what can be accomplished by an institution of this kind. It teaches the people how to take care of themselves. It is not necessary to have patients resident all the time in a sanitarium, as one of the greatest benefits to be obtained is, when the patient can come for a time only, staying until he is over the dangerous period in his career as a tubercular patient. Another thing is the knowledge which they gain of how to take care of themselves in their daily life. We could do fully as much, and more, toward controlling tuberculosis by institutions of this character, than in any other way. There are no restrictions which could possibly accomplish as much as an institution such as the Doctor has recommended.

DR. H. M. LYMAN—Human tuberculosis is unmistakably, in the vast majority of cases, due to inhalation of infected matter, and the disease usually begins in the root of the lung, in the lymph glands, whence it spreads to other parts of the body. Its commencement in the alimentary canal is very rare. In connection with the subject of cattle tuberculosis, it is well to remember those cases which Dr. Robison has alluded to. Tuberculosis was a very common disease in the Hawaiian Islands fifty years ago. I remember that the natives were very prone to the disease, but the cattle of the islands were not tuberculous. Neither did the natives use the milk nor the flesh of cattle to any great extent. The foreign residents, who used these articles, were not tuberculous. Among all the young people who grew up there, when I was young, I do not remember a single one who was tuberculous, hence I believe that we must accept cautiously some of the statements that tuberculosis in cattle is communicable to man, unless they are both subjected to the same conditions. Statistics show that tuberculosis has been most dangerous among people who live unhygienically, in illy-ventilated, dark houses, and just as soon as you deprive people of a free open life, you increase the occurrence of tuberculosis. The same thing is true of cattle. As long as they live in the open air, they remain healthy; as soon as they are taken captive and made to live in unventilated stables, they become tuberculous. Cattle kept in the open air generally have owners who live in the same manner, and tuberculosis is rarely found in either man or beast under such circumstances.

DR. J. A. ROBISON, closing the discussion—I wish to correct a misapprehension of my views, as I do not believe that my paper conveys the belief that I am a skeptic in this matter. I believe in the possibility of infection from cattle, but I do not believe that the probability is very great. I would prefer not to make up my mind either one way or the other, until the question has been more scientifically demonstrated. The point which I wish to emphasize particularly is that I do not believe we ought to continually place before the public the idea that the great danger, the one increasing the spread of tuberculosis, is tuberculous milk. I believe that it is one of the secondary causes. Until we have absolute proof of the disease being conveyed from cattle to man, let us keep it in the background and out of the papers. The result of this extensive writing is that the public is positively frightened. As Dr. Evans said, there are nine million dollars worth of cattle in this state that are liable to be condemned because they may be tubercular, and if you kill these without remunerating their owners, what is the result. You block the wheels of progress and you have a fight on your hands; an obstacle which is simply overwhelming. Following out the suggestions, which I made in the paper, you might appoint a committee, calling it the Committee on Tuberculosis, whose duty it shall be to investigate this subject as thoroughly as possible, in order to establish whether or not there is a possibility of communication of the disease.

INFLUENZA.*

BY G. E. CRAWFORD, PH.D., M.D.
CEDAR RAPIDS, IOWA.

I have chosen a somewhat commonplace and hackneyed subject, but it is that which we meet most frequently that is of the most importance to us as physicians.

The people have long since ceased to regard influenza as a joke; and the profession is coming to realize that it ranks among the more serious maladies with which we have to deal. The percentage of reported death-rate is small, yet on account of the vast number of cases the aggregate is very large. Besides, a large majority of the deaths directly due to influenza are reported under the names of the so-called complications and sequelæ which are in fact essential parts of the disease. The average death-rate of a community during the prevalence of influenza is always greatly augmented, and frequently doubled. This comes the nearest to the facts in the case, and shows that during certain periods there are as many deaths from influenza as from all other causes together.

During the first four months of this year there were in Cedar Rapids, a town of 27,000 people, ninety-five

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deaths, according to the board of health's report; and although in only eleven of this number is influenza given as the cause, yet the total number of deaths during those four months when influenza was very prevalent, was one more than double the deaths during the corresponding period of 1898, when influenza was only prevailing in a slight degree. Besides, during the past winter there was comparatively little sickness in the city other than influenza.

Nine years ago last December, when the great pandemic of influenza, or la grippe, swept over this country on its way around the world, the public in general and the lay press in particular jumped at the conclusion that it was a new disease, as they had done before in every previous epidemic. With the exception of the great epizoötic of 1872, which affected almost every horse in this country, and a great many people at the same time, the "epizutic," as it was popularly called, only the older members of this generation had witnessed a general epidemic of contagious catarrh. The first half of this century was attended by numerous epidemics of influenza, many of them being world-wide in extent, and after spreading over Europe, invaded this country through the various ports of trade and immigration.

From 1827 to 1851 these epidemics were especially prevalent. Old men who took part in the exciting political campaign of "Tippecanoe and Tyler too," in the fall of 1840, still talk about the "Tyler Grippe," which everybody had at that time.

Influenza is not a new disease. As early as the ninth century widespread epidemics of "catarrhal fever" or "Italian fever" are matters of history. The disease seems to be referred to by Hippocrates. The very name which has been generally adopted in modern medical literature savors of the superstition of the Middle Ages, when the occult "influence" of the stars and other heavenly bodies was believed to have much to do with the affairs of men. On account of the sudden and mysterious prevalence of the disease, it was termed the "influence"—the "influenza"—which is the simple Italian noun for influence.

The earliest epidemic in England of which we have a full and accurate description occurred in 1510. The earliest one recorded in America occurred in 1647. Most or all of the numerous epidemics which have prevailed in Europe in the past three hundred and fifty years have visited this country.

Scores of names more or less suggestive or facetious have been applied to the disease at different times and places. Cullen and the earlier Latin writers called it *catarrhus e contagio*. The Russian term, la grippe—the seizure—has become the most popular name among the people at the present time, and much employed in medical literature of late years. The great epidemic of 1782 affected the people of Vienna so suddenly and so generally that it received the name of "Blitz Katarrh"—lightning catarrh—and the term is still in use among the Germans. The term "contagious catarrh," or "epidemic catarrh," would be the most suggestive and scientific, were it not for the fact that it describes but one type of the disease, which in many cases is almost or entirely absent. So that after all the old term "influenza," handed down from the superstition of the past, as have been so many of our scientific terms, made classic by long usage, should be set apart exclusively to designate this most interesting and polymorphous disease.

Influenza is so variable in its forms that clinical pictures of typical cases of the different forms would appear to have but little in common excepting the initial head-pain, which seems to radiate to all parts of the body. An intelligent description of the disease therefore would have to begin with a consideration of the types and forms.

Various divisions have been suggested, based mainly on the organs affected. To my mind, the most natural and rational division is into the two types of the disease so constantly observed—the catarrhal and neurotic. These types may in turn be subdivided into forms according to the leading symptoms or parts principally affected; besides the various combination of forms, for there is every shade of blending of these contrasting types and various forms.

The catarrhal type of the disease divides itself into the respiratory and the gastro-intestinal or abdominal, according as the disease spends its force on the respiratory or alimentary muscosæ. The neurotic type may be divided into the cerebral, the neuralgic, the cardiac and the rheumatic forms. And a blending of these types and forms produces a common and serious variety, the typhoid form.

The literature of influenza would indicate that in most epidemics the prevailing type has been the catarrhal. But during the last nine years and five months since influenza has been constantly prevailing here, the two types have been pretty evenly divided, with perhaps a preponderance in favor of the neurotic type.

Influenza is usually described as appearing suddenly and, after a prevalence of a few weeks, subsides as rapidly as it came, and entirely disappears. This latter statement is in my judgment not true. The past nine years have certainly been a marked exception. While it is true that the very general prevalence only lasts a few weeks or months, spending its force and then abating, mainly for lack of material to work on, it still lingers in the locality in scattering cases, firing up into a general epidemic again as the external conditions, whatever they may be, favor its propagation and the persons formerly affected lose their immunity. I think the history of influenza will show that it has prevailed in groups of epidemics covering periods of a number of years. From 1837 to 1851 epidemics were in almost constant progress as has been the case from 1889 to the present time, although during the first year and the last year of the period there was a much greater prevalence of the disease. During this period I have had the personal experience of about 4000 cases of influenza; about 1000 during the fall and winter of 1889-90, and something more than that number during the past year, with a gradually diminishing number each year between, until last fall, when the disease became as prevalent as in the winter of 1890.

The idea has been almost universal in the profession that influenza only prevailed in the winter, and entirely subsided when warm weather came. This is true in a measure, as it is of diphtheria. There are certain known and unknown external conditions which favor the spreading of epidemics more at one time than at another. A disease whose point of invasion is the mucous membrane of the respiratory organs would naturally have an advantage when these membranes are irritated and congested by cold, and changeable weather. But influenza is not at all confined to winter weather or cold climates. It prevails alike on the snowy steppes of Siberia, or under the soft blue skies of Italy, along the palm-shaded banks of the Nile, and among the fragrant orange groves of Southern California. While it is true that for the past nine years the disease has been more prevalent in winter, there have been numerous cases

during the summer months, many more doubtless than have been recognized. The close resemblance to the milder manifestations of malaria, and the preponderance of the abdominal type of the disease in summer, both tend to obscure the diagnosis. Have you not all experienced a difficulty in determining just when malarial attacks began in the spring, and when la grippe returned in the fall? And those of you who had not thought of influenza prevailing in the summer, do you not recall the fact that last summer you prescribed for an unusual number of "bad colds" and coughs?

Until six years ago the specific cause of influenza was unknown. The numerous descriptions of the disease for the past three centuries agree substantially in the narration of the phenomena and course; and influenza has in all times been regarded as fulfilling all the conditions of a true epidemic. Cullen, writing in the eighteenth century, and who witnessed the great epidemics of 1762 and 1780-82 clearly recognized its contagious character and classed it among the "zymotic" diseases. Notwithstanding the general acceptance of the germ theory of disease for the past fifty years, there still lingered in the profession something of the medieval "influence," if not of some occult power of the stars, some equally unknown telluric or meteoric conditions; and during the epidemic of 1890 various old theories were reiterated, as an excess of moisture, ozone, etc., and little was said or thought about the personal infectious and contagious character of the disease.

Renewed investigation in the light of bacteriology fully confirmed its specific and contagious character. Pfeiffer of Berlin discovered the diplobacillus of influenza in the winter of 1893. His discovery has been verified by numerous investigators since, and is now readily demonstrated by any bacteriologist. The bacilli are found in enormous quantities in the nasal secretions at the beginning of the disease, and later in the bronchial sputum and in the blood, and the greater the number the more serious the case. Post-mortem, they are found in every tissue and fluid of the body, but seem to have an elective preference for nerve tissue. The germ is strictly anaërobic, and in cultures grows readily on blood-agar, or culture-media containing hemoglobin, which seems necessary to its development. Primarily a diplobacillus, it changes its form somewhat in successive cultures, first assuming more nearly the form of a true bacillus and later that of streptobacilli. The Pfeiffer bacillus is frequently found associated with other pathogenic germs. The recent very valuable investigations of Dr. Wynekoop of the Chicago Department of Health have shown the influenza bacillus present in cases of diphtheria, scarlet fever, measles and pneumonia; and the clinical behavior of the cases was difficult to understand until microscopic examination revealed the presence of mixed infection. And in cases where mixed infection was discovered in the beginning, the subsequent clinical course of the cases fully coincided with the diagnosis.

Influenza is extremely contagious and infectious. It is communicated by direct contact with a person affected with this disease or by infected fomites, as are measles, whooping-cough and scarlet fever. There is no evidence that the atmosphere is ever a medium of communication further than it conveys the breath or emanations of an affected person. The disease spreads not by the wind, as was formerly supposed, but from person to person; and in our day of rapid transit it may be carried to opposite sides of the continent within a single week.

The beginning of the present group of epidemics, starting out from the region of St. Petersburg, where influenza is always endemic, in September, 1889, reached the confines of civilization before the close of the year. The disease was in full blast in Cedar Rapids before Christmas; and appeared almost simultaneously throughout the United States along the main routes of travel. When we realize that Chicago is only twenty-four hours from New York, and points throughout the Middle West but a few hours' travel from that metropolis, and that a single person may infect a whole train-load of people, and they in turn as many homes and hotels, we can form some idea of the marvelous rapidity with which so contagious a disease can be spread about, simply by immediate presence.

The characteristic clinical picture of influenza is so familiar to all that a detailed description is unnecessary; besides the narrow limits of this paper will only permit a mention of the more contrasting symptoms of this many-sided disease. The length of the incubative stage is difficult to determine, as it is without symptoms, and the time of infection is generally unknown; but it is short, and probably varies from one or two days to a week. When a case enters a family all of the household are usually affected within a week, and often all are sick at once. The disease almost invariably begins with rigors, or a distinct chill, a dry sore throat, and headache which soon becomes excruciating, the pain radiating to every part of the body, with a condition and degree of prostration entirely out of proportion to the general symptoms and duration of the illness.

In the catarrhal type and the bronchial form, coryza and the general train of symptoms of a severe bronchitis rapidly supervene; a hoarse, tight, painful cough, which in many cases is very distressing. The fever is usually quite high, ranging from 103 to 105° F. during the acute stage. The initial headache, present in all forms of the disease, is not generally so severe in the catarrhal as in the neurotic type, the muscle pains and bone-ache causing the most suffering at the onset. There is tumefaction of the cervical glands, and occasionally the swelling at the angles of the jaw simulates mumps. The pharyngitis, always present in some degree, is very severe in some cases, with a tonsillar exudate greatly resembling some cases of diphtheria. Dr. Wynekoop, in his report previously alluded to, mentions cases of this kind which had been clinically diagnosed as diphtheria, in which a bacteriologic examination revealed the presence of Pfeiffer's bacillus; and the subsequent course of the cases confirmed the diagnosis of influenza.

One of the most distressing extensions of the catarrhal process is the invasion of the Eustachian tubes, and inflammation of the middle ear. The most serious of the catarrhal processes are bronchitis and pneumonia. The pneumonia of influenza is a peculiar specific affection, and an essential part of the disease. The bronchitis and bronchopneumonia and the peculiar circumscribed pneumonia of influenza are specific inflammatory processes directly due to the Pfeiffer diplobacillus. Real lobar pneumonia due to the diplococcus pneumoniæ is not a common accompaniment of influenza; and when it does occur is a coincidence and not an essential part of the disease. Circumscribed pneumonia occurs in a very large percentage of catarrhal influenza and is very often overlooked. Most of the physical signs of pneumonia are lacking. The area of solidification is usually deep seated, and inside of and just below the angle of the scapula. Auscultation at that point will detect bronchial breathing. It can seldom be heard in front. When the area is small, resonance is rather augmented, and has

something of a tympanitic character. When the area is large, it is attended with the usual physical signs of hepatization.

When the temperature persists in keeping up to 104 or 105 F., in spite of the ordinary measures, for three days, with pain in the chest, and difficulty in breathing, you may be sure you have this circumscribed pneumonia, although repeated physical explorations had failed to reveal it; and you will generally find it hiding behind the shoulder-blade. Both lungs are frequently affected. I know of no lung lesion of the same extent attended with such marked general symptoms. Bronchopneumonia or lobular pneumonia of influenza, where numerous lobules and small areas all through the lungs are blocked, is the most serious condition of catarrhal la grippe, and is very fatal in old people and young children. Convalescence is very slow; the lung may be permanently damaged, and presents a most inviting condition to subsequent tubercular infection.

The cough in many cases of influenza is very hard and spasmodic in character and simulates whooping-cough.

The abdominal form of catarrhal influenza has been unusually prevalent the past year. Added to the primary headache and fever and prostration, there is vomiting, cramping pains in the abdomen, and frequently profuse diarrhea—the general symptoms of cholera morbus. Small children are very likely to have convulsions.

In the contrasting type of influenza, the neurotic, the catarrhal symptoms are very slight or entirely wanting. There is, however, usually a sore throat. The headache is more intense and severe. Mental depression and general prostration are more marked than in the catarrhal, and are especially manifest in that variety classed as the cardiac form. Pain and distressing sense of constriction of the back of the neck is a frequent symptom of the neurotic type of the disease—a feeling as though the base of the brain was in a vise or a veritable giant's grip. This symptom is a very persistent one, and denotes serious damage to the lower centers of the brain or the medulla, often of a lasting or permanent character. I know persons who suffered from this condition nine years ago, whose nervous systems were so permanently damaged that a little overdoing, or too close application, can bring back this pain any day, with its attending languor and prostration.

The cerebral form is comparatively rare, but a very serious variety of influenza. The condition is probably usually toxic, but meningitis, and various inflammatory conditions of the brain, not well understood, are met with. I have recently had two fatal cases occurring in my practice. There is marked mental hebetude, delirium, and even mania, and in children, convulsions. In addition to the encephalopathies, myelitis, neuritis, and various nervous affections may appear. Apoplexy and paralytic strokes are frequent results of influenza in persons predisposed to these conditions. Well-marked cutaneous eruptions simulating the eruptive fevers are not of infreqent occurrence, probably due to the toxic effect on the trophic nerves.

The rheumatic form takes on the symptoms of either myalgia or inflammatory rheumatism, and occurs in persons of a lithic or rheumatic diathesis. It is an obstinate form of rheumatism and very prone to relapses.

The cardiac form, so-called, is manifested by great prostration, and heart weakness. It may be associated with the rheumatic form as an endocarditis; but it is usually an extreme functional weakness, which does not readily respond to heart tonics. It is probably a toxemia as is the general prostration of influenza. In persons with fatty muscles and atheromatous cardiac vessels it is very serious and often fatal. Few cases of influenza present one single typical form of the disease. There are endless combinations of these various forms, and some severe cases have them all during the progress of the disease.

There is a wide difference of opinion concerning immunity from subsequent attacks. Some go so far as to assert that one attack predisposes to other attacks rather than immunizes. I think this is an extreme view, and has its origin in confounding relapsing and chronic cases with new attacks of the disease. Influenza, like malaria, may remain in the system a long time, with frequent outbreaks and manifestations. A person who is said to have had three or six attacks of influenza within as many months has never recovered from the first attack, and has simply had relapses.

Immunity, while not permanent or of long duration in many cases, probably varies from several months to several years. I believe it is quite unusual for a person who has really recovered from the disease to have another attack in less than a year. Those who do are nearly all chronic or relapsing cases and if careful inquiry is made it will be found they have had manifestations of the disease during the interval. Tilaloff has observed several cases of influenza where there was "continuous slight fever for five months, and in two, intermittent relapses occurring at intervals for several years."

Every case of influenza should be regarded as serious, and the patient should be confined to bed until the fever and active symptoms have completely disappeared. Complete rest and proper treatment at the very beginning is of the utmost importance. The foolish notion so often tried, of "working it off," greatly aggravates the case and often precipitates the most serious forms of the disease.

The treatment of influenza is mainly symptomatic; but there are few diseases where judicious treatment is more important or beneficial. We know of no specific, in a true sense. Quinin has been given largely with that view, but, except in small tonic doses, it is useless and adds greatly to the discomfort of the patient during the acute stage. Quinin and whisky, formerly so much used by the people at the beginning of the attack, is worse than no treatment, and has sent many a case to the doctor which otherwise would have recovered unaided. Some of the coal-tar derivatives give marvelous relief from pain during the onset of influenza; but if not carefully employed will add to the prostration and cardiac weakness. Phenacetin as an analgesic and antipyretic is the best and safest of this class of remedies when large doses are required.

A favorite prescription of mine, which I have used very largely and have prepared in quantities in gelatin-coated pills, is the following: each pill contains

Acetanilid	gr. ii
Caffein	gr. ss
Camphor monobromid	gr. i
Capsicum	gr. ss

One of these, repeated every hour, for two or three times, gives almost complete relief from the suffering in ordinary cases, and produces no depression. When the fever is high and headache severe, a single full dose of phenacetin, followed by these pills as required, has been the most satisfactory palliative treatment I have found, for the large majority of cases.

European writers especially have lauded the curative virtues of salophen. I have tried this remedy repeatedly, but have been invariably disappointed. In the

rheumatic form, where it would be expected to do the most good, I have found it in every way inferior to salicylate of soda. Small repeated doses of calomel, carried to mild purgation, are beneficial at the beginning of almost all cases. The main indication for treatment, after the relief of suffering, is supportive, from the beginning, to counteract the extreme prostration which sets in almost immediately with the attack. Tonic doses of quinin, iron and strychnia meet this indication better than anything else in a majority of cases. Another favorite prescription which I use in almost every case in adults is a little "No. 3" capsule containing

Quinin	gr. i
Cinchonidia	gr. i
Pyrophosphate of iron	gr. ii
Strychnia sulph	gr. 1/40

One of these is given four times a day, or every four hours as indicated. Some cases require special nerve and cardiac tonics. A useful prescription in heart weakness is

Tr. strophanthus	gtt. iii
Tr. cactus grandiflorus	gtt. xii

Give three to six times in twenty-four hours. In children, with whom bronchitis is usually the leading feature, muriate of ammonia with ipecac in syrup of tolu is a most valuable remedy. Opiates are not often indicated in influenza, excepting morphia with atropia hypodermically to relieve obstinate neuralgic pains; and Dover's powder in some cases of painful cough. The pharmacopeia is very rich in general and special tonics, and may be drawn upon to meet the requirements of the various conditions, or suit the fancy of the prescriber. Bark, iron, strychnia, arsenic and phosphorus represent about all the virtue of this class of restoratives.

PHYSICAL STANDARDS OF NATIONAL GUARDSMEN.*

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The object of this paper is to elicit discussion and lead up to uniformity of action in all the states. That I may conserve your time, I shall be brief, and beg that my brevity may not be mistaken for dogmatism.

Political history demonstrates that every nation has frequent crises in its affairs when the show of armed force is necessary. Ability to rapidly mobilize a formidable fighting force makes for peace. Industrially and commercially that country is the strongest which can spare the largest per cent. of its men to civil employments. The policy of territorial expansion beyond seas, by whatever form of government adopted, has always required a larger military establishment than would have been required had the same territory been contiguous to the mother land.

This counry must then in its present situation be either equipped with a large standing army or cultivate within its industrial class those qualities of mind and body which best prepare for service under arms. The military surgeon has a duty to perform in enlightening the public as to the exact physical qualifications for service in the regular army, and to point out how the youth may develop themselves so as to make good soldiers if their country calls.

Before discussing the qualifications for service in the National Guard, permit me briefly to call to mind the duties for which applicants must prepare themselves. They represent the moral and physical force on which the governor of the state depends for preservation of law and order, to suppress riots and insurrections and to repel invasion. The dignity and responsibility of such duties need not be dwelt on, but should always be incorporated into the very being of the citizen soldier. Any personal sacrifice he may make is as nothing when compared with the good of the service and the honor of his State. But the real duty of the guardsmen does not stop at the state line when the nation is involved in war. They should be the first in the volunteer service, and whether they go out as regiments or individuals should be left to the U. S. War Department. There the probable scope of the war is better known than elsewhere. If few regiments are required, they may be called out en masse. If many will be needed, separate enlistments are preferred, since skeleton regiments of guardsmen can be filled with raw recruits.

The difference between ordinary national-guard discipline and that of the army on war footing has to be reckoned with in the officering of troops in the field. The better the discipline in any regiment, and the more closely the physique of it conforms to the regular army standard, the more likely is it to be called out with its own officers in case of need. Line officers should remember that care of the health of their commands and reports to headquarters are important elements in determining their efficiency.

It may be conceded that some of the functions of the National Guard may be just as well performed by men not up to the army standard in every particular. For service in street riots, where action must be at close quarters, the high standard of eyesight is not required, and dependence on glasses does not impair a man's usefulness. Here, the same maturity and seasoning is not imperative. The troops are usually quartered in comfortable barracks or camped in very favorable locations, and many of the hardships of field service avoided. The guardsman will probably not see hard service and a very important part of his work will be to develop his physique so he can do the full work of a soldier. The bones, muscles and vital organs have not developed fully enough for the severe work involved in active service before the age of 22 years, but it is acknowledged that younger men more readily acquire the drill and habits of discipline so necessary for the soldier. The recruit should therefore be enlisted at 18 or 19, if sound, and possessed of a physique promising the full army standard at maturity. To that end a careful physical examination should be made and the record preserved. After two or three years of weekly drills, and two or three short seasons of actual work in camp, the guardsmen should be eligible to enlistment in a body of men selected with the greatest care as to mental, moral and physical qualifications, of mature age and with considerable military experience. They should be enlisted and equipped for active service at any time and might be called "minute men" or "veteran guards." Their colonel should be a regular army officer, and they should each year have a tour of duty for at least a month, at some regular army post. For these men the standard of the United States Army in time of peace is none too high.

For the ordinary national guardsman we will consider in what respects the army standard may be departed from without endangering the efficacy of the guards. For many reasons a minimum qualification should be advanced, and all men who can reasonably be expected to

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develop up to the required standard on devoting themselves to the drills should be accepted. On the other hand, all who would be likely to break down at the first severe test must be rejected. Besides the exact physical condition of the recruit, his family and personal history must be investigated and the diseases from which he has suffered considered. With these favorable, we may, after a careful physical examination and accurate measurement of height, weight and chest description and measurement, predict very accurately what the average youth of 18 will be at 22. Upon this postulate I shall base the following outlines. At 22 he may be expected to be from one to two inches taller in total height. The distance from the center of the symphysis pubis to the upper border of the breast bone (chest fully expanded) is a most important measurement, and one which, taken with the girth at the navel and horizontally at the angle of the scapula at inspiration, forms the basis for a very accurate calculation of the capacity of the space occupied by the organs of circulation, respiration and nutrition. This sterno-pubic measurement has the advantage of but a slight variation between 18 and 22 years of age. The chest at inspiration will average 1 1/3 inches more at the latter age, and the girth of the abdomen will have increased slightly less. The total height may be expected to increase about 1½ inches, mainly by the natural growth and ossification of the epiphyses (chiefly the lower epiphysis of the femur and the upper epiphysis of the tibia and fibula). Since complete union of these epiphyses does not always take place before the age of 25, height may be increased by lengthening of the legs up to that age.

The average weight for the American male at the age of 22 will be estimated by allowing two pounds for each inch up to sixty-seven inches, and five pounds for every inch above this. After twenty-three years the same rule holds true except that seven pounds per inch above sixty-seven must be figured. About twenty-five pounds above and below these averages seems to be incompatible with good health and physical vigor; yet when the recruit's weight approaches either of these extremes his physical examination should be made most circumspectly, particularly if the younger man approaches the maximum or the older one the minimum. If the minimum figures are approached without other explanation, analysis of the urine should be made to exclude diabetes, and symptoms of tapeworm should be looked for. In approaching the maxima, the ratio of adipose tissue to muscle should be estimated.

Actuaries of life insurance companies have made a close study of the relations of height to weight in reference to longevity in civil life, and their most approved table is given below.

Height.	Minimum Weight.	Maximum Weight.
63 inches	106	160
64 inches	111	167
65 inches	114	170
66 inches	116	174
67 inches	118	178
68 inches	124	186
69 inches	130	194
70 inches	135	203
71 inches	139	209
72 inches	142	214
73 inches	147	220
74 inches	151	226

In applying these figures to military use, it must be remembered that these are taken in ordinary clothing, and a reduction of about one-eighteenth must be made to allow for the clothes.

THE TREATMENT OF ANEURYSMS BY SUBCUTANEOUS GELATIN INJECTIONS.

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The year 1898 added still another to the many methods that have been advanced to the treatment and cure of aneurysms. To Lancereaux of Paris is due the credit of having introduced this method to the medical profession. The treatment in question consists in the injection of sterilized solutions of gelatin into the subcutaneous tissues.

The method is based on the experimental work of Dastre and Floresco[1], who studied the effect of gelatin solutions on the coagulability of the blood. These observers went only so far as to show that the coagulability of the blood was increased when the gelatin solution was brought into direct contact with it, whether this be the circulating blood of the animal or the blood of the animal after removal. They found that the injection of gelatin solutions into the blood-vessels of dogs and rabbits caused a rapid coagulation of the blood. They employed for their experiments 0.8 gram of gelatin per kilogram body weight of the animal, in 5 per cent. solution, 0.8 per cent. sodium chlorid solution being used as the dissolving medium. The gelatin solution, however, did not possess the power of neutralizing the anticoagulative action of oxalates and other strong salt solutions. A definite antagonism existed between the coagulative effect of the gelatin and the anticoagulative effect of the proteoses and propeptone. The coagulative action of the gelatin was to the anticoagulative action of Witte's peptone as 1 is to 3.

Camus and Gley[2] were able to confirm the observations of Dastre and Floresco. They did not believe that the increased coagulability of the blood was due to any specific action of the gelatin, but rather to the acids which the gelatin contained. By neutralizing the acidity of the gelatin with sodium carbonate, they claimed that it lost its coagulative action, and that this action was increased by increasing its acidity. According to Camus and Gley, the antagonism of gelatin and propeptone is due to the acidity of the former and the alkalinity of the latter. Floresco[3] agreed in part with the explanation of Camus and Gley, but still insisted that the effect of gelatin was not due to the acid it contained, though in large part to a specific action which it possessed.

Although Dastre and Floresco were the first to demonstrate that gelatin increased the coagulability of the blood when brought into direct contact with the latter, Lancereaux was the first to show that the same effect could be obtained by the injection of the gelatin into the peritoneal cavity and subcutaneous tissue. He proposed to use this action of gelatin as a therapeutic agent in the treatment of aneurysms.

Lancereaux[4], in association with Paulesco, first brought this method of treatment before the members of the Academy of Medicine, in Paris, in June, 1897, and subsequently in October, 1898. They[5] [6] reported five cases in which they had adopted the treatment.

Technic of Giving the Injections.—Lancereaux gives the following directions for the making of the gelatin solution and the giving of the injections. The solution is made by dissolving 4-5 grams of white gelatin in 200 c.c. of 0.7 per cent. sodium chlorid solution, and steriliz-

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ing thoroughly at 120 C. The flasks are kept for several days at a temperature of 38 C., and any in which the gelatin becomes turbid or fails to harden in the cold are discarded.

For giving the injections he uses a 500 c.c. sterilized flask, with a tight-fitting rubber stopper through which two glass tubes pass. One of the glass tubes extends to the bottom of the flask and is connected by rubber-tubing, with a proper-sized needle. To the other short glass tube a stiff rubber inflating-bulb is attached. In order to purify the air a glass bulb filled with absorbent cotton is interposed between the rubber bulb and the flask. The temperature of the gelatin solution must be 37.6. According to Lancereaux, no pain should be produced by the injections. With proper asepsis and antisepsis there should be no general nor local reaction. After the injection the patient should have absolute rest, and palpation of the aneurysm must be avoided. The injections are made at intervals varying from two to fifteen days. Lancereaux thinks that best results are obtained by giving them every sixth to eighth day. He states that, generally speaking, ten, fifteen or twenty injections are necessary to effect a cure. He advises injecting the gelatin solution into the subcutaneous tissue of the thigh, and never into or in the vicinity of the aneurysmal sac.

Huchard emphasized the importance of aneurysm patients taking the proper sort of diet. An essential point in the treatment is the lessening of the arterial tension. For this reason all sorts of food which tend to produce toxins having a vasoconstrictor action must be avoided. Bouillon, fat soups, meat, fish, particularly sea-fish, and cheese must not form a part of the patients' dietary. Alcohol, tea, coffee and tobacco are also forbidden. A strict milk diet is preferable, but fruits and leguminous foods may also be permitted. Drugs which cause a dilatation of the blood-vessels, such as iodids and nitrites are also useful.

Of Lancereaux's five cases, three were reported as being cured. In these cases the aneurysm was saccular in form. The other two, which terminated fatally, were instances of diffuse dilatation of the arch of the aorta.

In order that the effect of the injections in Lancereaux's cured cases may be better appreciated, I purpose giving a brief summary of the cases and the effect of the treatment.

MALARIA. AORTITIS WITH ANEURYSM OF THE ARCH OF THE AORTA; SUBCUTANEOUS INJECTIONS OF GELATIN. CURE.

CASE 1.—The patient was a man, 50 years of age, with malaria nine years ago; no syphilis nor arteriosclerosis. For three years he had an aneurysm of the ascending aorta; right intercostal neuralgia and angina pectoris for six months; visible pulsating; tumor to right of sternum for one year; second to fourth costal cartilages and the greater part of the sternum eroded; definite systolic expansile pulsation. On auscultation both heart sounds were audible, but no murmurs. The radial pulses were equal. The patient could lie only on the right side; change in position caused cough, hoarseness of the voice, and a sense of anxiety and feeling of oppression in the chest. There had been rapid growth of the aneurysm and ecchymoses had occurred in the skin over the aneurysm.

Jan. 20, 1898: Subcutaneous injection of 250 c.c. 5 per cent. gelatin solution. On the following day the aneurysm was firmer. For several days it diminished in size and then became larger and soft.

February 10: A second injection of 150 c.c. 1 per cent. solution of gelatin. The aneurysm again became smaller and firmer. Pain disappeared and angina pectoris ceased. He could change position without discomfort.

From February 10 to May 12, twelve injections were given, with the following result: Marked diminution in size of the tumor and cessation of the pulsation. The patient was able to work. After one year, intercostal neuralgia again returned, and the lower part of the tumor again began to grow and become soft. After two injections these manifestations subsided and the aneurysm became firmer. After the lapse of one month the pain and pulsation again returned, to disappear again after a single injection. The last two pulsations which appeared were not due to a return of the pulsation in the original aneurysm, which remained hard and free from pulsation, but to the development of two new aneurysmal dilatations beneath it.

Although Lancereaux regards this case as having been cured, the result is not so satisfactory as one would desire to have it.

ANEURYSM OF THE ARCH OF THE AORTA. CURE.

CASE 2.—The patient was a man 48 years of age; eight months previously he had suddenly felt something burst in the upper part of the chest, and expectorated a small quantity of blood. Since then he had complained of severe pain and a sense of oppression at the same point whenever he lifted anything heavy. The veins were dilated over the right side of the thorax; pulsation in the second right intercostal space, where a soft systolic murmur was audible. Both carotids and radial pulse equal. On May 20 he was given an injection of 200 c.c. of a 2 per cent. gelatin solution; up to August 1, ten such injections were given, one each week. The systolic murmur, the pulsation, the dilatation of the veins and the subjective symptoms disappeared. Two injections were given subsequently and the patient was discharged cured.

ANEURYSM OF THE RIGHT SUBCLAVIAN ARTERY.

CASE 3.—A coachman, 50 years of age, in July, 1898, suddenly began to experience a creeping sensation in the right arm. During the following days he suffered intense lancinating pain and still later the motor power of the right arm became impaired. He had never had lues. Beneath the right clavicle, to the outer side of the scalenus anticus muscle, a distinct pulsating tumor, the size of a nut, was visible; no pulsation in brachial or radial artery; the right arm felt warm, the last phalanges were thick and the finger-nails deformed.

Jan. 18, 1898: Subcutaneous injection of 200 c.c. of a 2 per cent. gelatin solution. Up to April 9 eleven injections had been given. After the first injection the aneurysm became harder; following the third, two soft murmurs were audible, which were not previously present; the pain disappeared. The patient was permitted to move his arm and the aneurysm again began to soften, pulsate and grow larger. After two subsequent injections the aneurysm became firm and the pulsation disappeared. From May 1 to June 20 the patient received nine injections. On July 5, a weak but definite pulse was felt in the right radial. The radial pulse became subsequently inappreciable, to appear again after two injections were given. The patient left the hospital on August 13, able to work.

As already stated, the other two cases were instances of diffuse dilatation of the aortic arch, and, although they were given several gelatin injections, no improvement resulted and both terminated fatally. One died

of coma and in the other the aneurysmal dilatation ruptured into the posterior mediastinum.

In all five cases there was no local reaction following the injections; there was no elevation of the temperature and the injections were not painful. In the two fatal cases no serious consequences occurred which could be attributed to the gelatin injections.

That the gelatin injections are not entirely without danger to the patient is suggested by the cases reported by Boinet and Barth.

Boinet's[7] patient, a man aged 33, had an aneurysm of the ascending portion of the aortic arch. Not having improved under the iodids, he was started on the gelatin injections. As a result, fibrin was deposited in the lower part of the aneurysmal sac, leading to compression of the pulmonary artery. This compression, in the opinion of Boinet and Huchard, led to double-sided pulmonary tuberculosis. Three months later evidences of compression of the superior vena cava appeared, and a few days subsequently the patient died. The autopsy showed that the lower part of the sac was coated with a layer of firm coagulum 6 cm. thick. There was a deposition of fibrin in the adjacent portion of the pulmonary artery and the lumen of the artery was markedly narrowed.

In Barth's case, referred to by Huchard, the aneurysm was also situated in the ascending portion of the arch of the aorta. After the sixteenth injection, the temperature became elevated and a large abscess developed at the seat of inoculation. Two months after the treatment had been started the patient suddenly felt suffocated, anxious, weak, and fainted. She remained in a semi-comatose condition until her death. The autopsy showed that the aneurysmal sac was completely filled with a clot easily separable from the sac wall. Firm clots had also extended into all the branches of the aorta, excepting the left subclavian, causing an acute anemia of the brain, and sudden death.

Huchard[8] thinks that these two cases show not only the remarkable coagulative power of the gelatin, but also the danger of the method. For the latter reason and from the fact that in one of his own patients the injections of the 2 per cent. gelatin solution caused intense pain, he recommends the substitution of a 1 per cent. gelatin solution injected at intervals of not less than eight to ten days. Absolute rest on the part of the patient is very essential.

Lancereaux would not agree that Boinet's and Barth's cases died as a result of the effect of the injections. He stated that the coagulation in the aneurysmal sac, in Boinet's case, should diminish rather than increase the compression on the pulmonary artery. In Barth's case he believed that the symptoms preceding death were those of uremia and that the clots in the aortic branches were agonal or post-mortem in formation.

In the opinion of Lancereaux, the subcutaneous injection of gelatin solutions is followed by the absorption of the gelatin into the circulation with the result that the blood coagulates much more easily. With this increased coagulability of the blood, there exists in the aneurysmal sac two conditions which predispose to the coagulation of the blood, viz.: a slowing of the blood-current and an unevenness of the vessel wall. The contraction of the clot thus formed leads to a diminution in the size of the aneurysmal sac, following which there is a disappearance of the compression symptoms. If the clot becomes separated from the sac wall, then the blood forces its way between the sac and the clot, and the aneurysm again begins to grow. In diffuse dilatations of the aortic arch, such as occurred in the fourth and fifth cases of Lancereaux, there is little or no slowing of the blood-current and clot formation does not occur even with the gelatin injections.

Lancereaux's report before the Academy of Medicine, in Paris, of his method of treating aneurysm, created considerable discussion. The main point at issue was whether the gelatin was actually absorbed, and if so, in what manner? The views advanced were very conflicting. Laborde holds that the gelatin solution is not really a true solution but a suspension of the gelatin in very fine particles, as can be demonstrated with the microscope. If absorption takes place it must be of the nature of a diapedesis. He is inclined to support the view that the repeated injections lead to the absorption of large amounts of fluid, which, through a change in the blood-pressure or from some unknown change in the blood itself, influence its coagulability. He thought that possibly apeptinization of the gelatin occurred before absorption. He advises that the gelatin injection should be made into the sac itself, or into its immediate vicinity. Lancereaux insisted that the gelatin was an actual solution and did not think that the amount of fluid absorbed with each injection could have any influence on the blood-pressure. He thought that the injection of gelatin solution direct into the aneurysmal sac would be exceedingly dangerous. He believes that the gelatin is absorbed from the subcutaneous tissue by way of the lymphatics.

Camus and Gley[9] injected gelatin into the peritoneal cavity of rabbits and, contrary to Lancereaux's results, found no increase in the coagulability of the blood. They further held that even two hours after the injection was made, practically the full amount could be recovered from the peritoneal cavity. Lancereaux again repeated and confirmed his experiments and showed that the substance recovered by Camus and Gley was not gelatin solution but a fluid rich in albumin and fibrin. When these are first precipitated it will be found that only a fraction of the original amount of gelatin injected can be recovered.

It will be seen from the above that the results of the experimental work in gelatin injections have been most conflicting. The opinion of one good observer is pitted against that of another. There seems little doubt, however, but that the gelatin injections do cause a distinct increase in the coagulabilities of the blood.

Sorgo[10], who had recently impartially reviewed the literature on the subject, states that there is little doubt that the gelatin injections cause a rapid and sure coagulation of the blood in saccular aneurysms. This is attended by no serious dangers when the patient observes the prescribed rules for dieting and rest.

With the object of giving the gelatin treatment a trial, Dr. Osler commenced its use in a series of aneurysm cases admitted to the medical wards of the Johns Hopkins Hospital. Following Lancereaux's latest directions, we have used 250 c.c. of a 1 per cent. solution of white gelatin in physiologic salt solution at each injection. In the early cases the injections were made every other day, but subsequently they have been given every fifth day. They have been given either into the subcutaneous tissue of the thigh or into that of the abdominal wall. Frequently the injections were much less painful in the latter than in the former situation. Instead of following the technic of Lancereaux, we have used, as a satisfactory substitute a 50 c.c. syringe, five syringefuls being injected, care being taken not to introduce any air. The injections were made under the strictest aseptic precautions. The solution must be in-

troduced slowly, otherwise it will cause considerable pain. It is not absorbed so readily as normal salt solution.

Since October, 1898, the treatment has been commenced on nine aneurysm cases in all. In only the first six of these patients had the injection been given sufficiently long for the treatment to have had a fair trial. In all the cases the blood coagulation time was taken by means of Wright's coagulation tubes immediately before and six hours after each injection was made.

ANEURYSM OF THE ARCH OF THE AORTA.—SIX SUBCUTANEOUS GELATIN INJECTIONS.—SUDDEN DEATH BY RUPTURE OF THE ANEURYSM INTO THE LEFT BRONCHUS.

CASE 1.—J. B., a laborer, aged 27, was admitted to the Johns Hopkins Hospital, for the second time, Oct. 7, 1898, complaining of severe pain over the precordial and scapular regions. Cough, difficult swallowing and huskiness of the voice were prominent subjective symptoms. A distinct saccular aneurysm of the aortic arch projected forward in the first, second and third left interspaces, causing a distinct tumor which possessed an expansile pulsation. There was dulness on percussion in the upper left interscapular region, posteriorly. An interesting physical sign was the presence not only of a palpable but also of a visible tracheal tugging.

From November 2 to November 15, six gelatin injections were given. The majority were attended by intense agonizing pain at the seat of injection, lasting up to and most intense six hours after the injection. Those made into the abdominal wall gave least pain. The blood coagulation time was taken only once in this case, namely, before and four hours after the sixth or last injection, on November 15. The coagulation time before the injection was seven minutes, and after it was only four minutes, showing a reduction of three minutes. At 8 p. m., November 16, the patient died of a severe attack of hemoptysis, about 600 c.c. of blood being expectorated.

The autopsy revealed a general dilatation of the aortic arch with a localized saccular aneurysm at the junction of the transverse and descending portions of the arch. At the point of pressure of the sac on the left bronchus there had been a perforation causing the hemoptysis and sudden death.

ANEURYSM OF DESCENDING THORACIC AORTA; FIFTY-SIX GELATIN INJECTIONS; MARKED DIMINUTION OF THE PAIN; DIMINUTION IN SIZE OF THE ORIGINAL ANEURYSM. PATIENT STILL UNDER TREATMENT.

CASE 2.—U. C., a laborer, aged 42, was admitted to the hospital for the third time, Nov. 5, 1898, complaining of severe pain in the abdomen and back. There was considerable pulsation over the lower left submammary region, and a quite marked pulsation in the lower part of the left interscapular and upper subscapular regions. The patient suffered intense pain in the left submammary region, and usually lay on his face with a pillow pressed against the epigastrium. A diastolic and systolic murmur had been heard over the pulsation in the back, on a previous admission. There was cardiac hypertrophy and considerable extension of the cardiac flatness to the right of the sternum. The first gelatin injection was given on November 9, and was followed by an elevation of the temperature to 100 F. After two other injections, the second and thirty-fourth, the temperature also became elevated, reaching to 101.7 and 100.6 F. respectively. After the thirty-fourth injection there was also a distinct rigor. There was no local reaction. From Nov. 9, 1898, to May 21, 1899, the patient had received fifty-six injections. There had been almost an immediate diminution in the pain as soon as the injections were started. The pulsation in the front and back had distinctly lessened, but during the last three months either the same or another aneurysm has pushed the heart forward and now has caused a distinct bulging and pulsation in third and fourth right interspaces, between the lateral, sternal and mammillary lines. In the majority of instances there was a diminution of the coagulation time, after the injections. An interesting feature of this case is that for several days during the treatment the coagulation time, both before and after the injections, was markedly delayed, as compared with normal, the average time being about twenty minutes. This was the case at the time of the twenty-third injection on Dec. 30, 1898. On this day the fresh blood was diluted with Hayem's solution, and examined for platelets and none found. On January 5, when the coagulation time had dropped to seven and one-half minutes, the blood contained numerous platelets. These observations seem to suggest a definite relationship between the coagulation time and the number of platelets. Although this patient has gained twenty-five pounds since the treatment was commenced, and although the pain has been much less, we can do no more than state that the original pulsation has diminished and the subjective symptoms have lessened. The number of injections given, fifty-six, was nearly three times the maximum number regarded by Lancereaux as necessary to effect a cure.

ANEURYSM OF THE ABDOMINAL AORTA; TWENTY-ONE GELATIN INJECTIONS; NO APPARENT IMPROVEMENT.

CASE 3.—O. G., a farmer, aged 47, was admitted to the hospital for the third time, on Oct. 23, 1897, complaining of pain in the right side of the abdomen, just below the margin of the ribs, and of pain shooting down into the hips. He also suffered intense pain in the left lumbar region of the back. He was in the hospital for the first time, in October, 1896, with mitral and aortic insufficiency. The pain already described had been complained of for eight months previous to his admission. He was admitted a second time in March, 1897, when an aneurysm of the abdominal aorta was diagnosed. On the third admission there was marked cardiac hypertrophy with mitral and aortic insufficiency. In the epigastrium, slightly to the left of the median line, there was a distinct pulsation of an expansile character. There was no palpable thrill, but a distinct systolic bruit over the pulsation. A definite, visible and palpable pulsation was present in the lower part of the left back. The first gelatin injection was given on Nov. 9, 1898. After the second injection the temperature rose to 101.9 F.; there was no local reaction. Following two subsequent injections there was a distinct rigor with an elevation of temperature to 100.4 and 101.1 F., respectively. Up to Feb. 11, 1899, the date of the last injection, twenty-one injections had been given. Owing to the injections having been painless, and as there had been no material diminution in the size of the aneurysm, the treatment was stopped. The coagulation time was distinctly reduced after nearly every injection. One hour before the first injection the coagulation time was four minutes, forty seconds. Five hours after injection it was reduced to two minutes, five seconds.

DIFFUSE DILATATION OF AORTIC ARCH; THIRTY-FOUR INJECTIONS; NO IMPROVEMENT.

CASE 4.—C. L., colored, a laborer, aged 48, was admitter to the hospital on Oct. 14, 1898, complaining

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of pain in the lower left side and in the back. He had distinct cardiac hypertrophy. There were no endocardial murmurs. The second aortic sound was ringing and accentuated. There was a distinct diastolic shock over the base of the heart. The manubrium was prominent, and with each cardiac systole there was a distinct heaving over the upper part of the thorax, with definite lifting of the manubrium and both clavicles. There was no thrill nor murmur over the area of pulsation. The first gelatin injection was given onNovember 9, and the last, or thirty-fourth, on March 14, 1899. This patient usually suffered intense pain for several hours after the injections. On several occasions there was considerable elevation of temperature after the treatment. After several of the injections made into the abdominal wall sensitive nodules, the size of a hickory nut, developed. These lasted for six to eight days and then disappeared. None of them suppurated. The patient gained seven pounds under the treatment, but the pulsation was not diminished. The coagulation time was reduced after nearly every injection.

ANEURYSM OF THE ABDOMINAL AORTA; EIGHTEEN GELATIN INJECTIONS UP TO DATE; DIMINUTION IN SIZE OF THE ANEURYSM AND CESSATION OF PAIN; PATIENT STILL UNDER TREATMENT.

CASE 5.—W. G., an oysterman, aged 36, was admitted to the hospital on Feb. 9, 1899, complaining of severe pain in the abdomen, which radiated around the whole body. Pain, the first symptom, began nine days before admission. In the left half of the epigastrium there was a distinct visible pulsation. On palpation, a definite tumor, possessing a pulsation, having an expansile character, could be grasped between the hands. There was no thrill, but a harsh systolic murmur was audible over it. The first injection was given on February 13. This and the subsequent one were very painful, and both were followed by rises in temperature to 99.8 and 101.5 F., respectively. After the sixth injection the patient began to suffer much less pain, referable to the aneurysm, and since then has been quite comfortable. Following several of the injections an appreciable diminution in the size of the tumor could be made out several hours later. Up to June 2, eighteen injections had been given. The pain has now disappeared and the aneurysm is distinctly smaller.

Most of the following patients received but one or two injections owing to their being unwilling to remain in the hospital.

ANEURYSM OF TRANSVERSE PORTION OF AORTIC ARCH; SEVERE PAIN IN LEFT INTERSCAPULAR REGION; ONE GELATIN INJECTION; NO IMPROVEMENT.

CASE 7.—L. D., a clerk, aged 51, was admitted to the hospital on Dec. 28, 1898, complaining of pain in the left side and back. There was a distinct visible lifting of the manubrium and of the sternal end of the right clavicle. Tracheal tugging was appreciable. There was faint diastolic shock over the pulsation; no thrill; no audible murmur. The patient was given a gelatin injection on December 18. The pain at the seat of injection was so intense that the treatment was not continued. There was no relief of the original pain complained of.

ANEURYSM OF ASCENDING PORTION OF AORTIC ARCH; SEVEN GELATIN INJECTIONS FOLLOWED BY TEMPORARY IMPROVEMENT AND THEN A RELAPSE OF SYMPTOMS.

CASE 6.—J. T., a sea-captain, aged 51, was admitted to the hospital on April 24, 1899. There was a marked bulging of the manubrium area of the first and second left interspaces and second rib. He had had pain, cough, dyspnea, difficulty in swallowing, and dysphagia. The first gelatin injection was given on April 27. This was followed by a chill and an elevation of the temperature to 103 F. The subjective symptoms were relieved after the first three or four injections, but subsequently the pain returned, and when the patient left the hospital the aneurysm had increased in size. The coagulation time was reduced after the injections.

ANEURYSM OF TRANSVERSE PORTION OF THORACIC AORTA; TWO GELATIN INJECTIONS; RELIEF TO SUBJECTIVE SYMPTOMS.

CASE 8.—J. N., a laborer, aged 51, was admitted to the hospital on May 13, 1898. There was an aneurysm of the transverse portion of the aortic arch causing slight lifting of the manubrium and marked subjective symptoms of dyspnea, cough, pain, huskiness of the voice and dysphagia. Two injections were given, the second followed by a chill and an elevation of the temperature to 103 F. After the injections the subjective symptoms were much relieved. The patient refused to remain in the hospital and was discharged.

ANEURYSM OF TRANSVERSE PORTION OF AORTIC ARCH; ONE INJECTION; SLIGHT IMPROVEMENT OF SUBJECTIVE SYMPTOMS.

CASE 9.—J. C., a sailor, aged 39, was admitted to the hospital on May 18, 1899. There were no physical signs of an aneurysm, excepting slight dulness over the manubrium and appreciable tracheal tugging. As subjective symptoms there were dyspnea, cough, pain and huskiness of the voice. He received one gelatin injection, after which the subjective symptoms were appreciably less. Not being able to remain longer in the hospital he was discharged.

The following conclusions may be drawn from our experience with the gelatin treatment in these nine cases:

1. In not a single instance has the aneurysm been cured, although in one case (No. 5) the abdominal aneurysm has diminished considerably in size and the case is still under treatment.

2. In seven of the nine cases there was an appreciable diminution in the subjective symptoms referable to the pressure of the aneurysm.

3. It seems quite certain that the subcutaneous injection of gelatin solution does materially increase the coagulability of the blood.

4. Contrary to the statement of Lancereaux, we have found that the gelatin injections are frequently very painful to the patient, the pain lasting and being most intense often as late as six hours after the injection.

5. Although Lancereaux states that with strict antiseptic and aseptic precautions there should be no elevation of temperature, we have found the contrary. In several instances the injections were followed, two to four hours later, by a distinct chill, with an elevation of temperature reaching at times as high as 103 F. In no case did we have any local suppuration, and in only one case (No. 4) was there even any local reaction.

6. Notwithstanding the fact that we have not yet a case which can be reported as cured, I am convinced that there is some merit in the treatment, and that it deserves a further trial.

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CONTAGION IN LEPROSY AS OBSERVED IN SAN FRANCISCO.*

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There are quite a number of lepers in San Francisco, many more than the eighteen or nineteen who are at present in the pest-house. The important question, however, before the city itself and before the United States is whether San Francisco and the Pacific Coast is merely a temporary abiding place for a few lepers who have come to it by accident, or whether this part of the United States is really becoming a leper focus where the disease may be contracted.

The difference between these two conditions is very great. London, Paris and Berlin, for instance, have always a number of lepers who have come to them either as returned officials or merchants who have acquired their disease in a leper country, such as Tonquin or India, or as patients seeking medical advice, but it is not considered that any of these cities constitute leper centers where leprosy is contracted[1], whereas Iceland, the Hawaiian Islands, the Province of Kwang Tung in China, for example, are undoubted leper centers where the disease is contracted not alone by the natives themselves but by immigrant strangers. To which class does San Francisco belong?

By San Francisco is meant the whole Pacific Coast, as the city is only mentioned because it is the point of view of the writer, and besides, being the largest port on the coast, it is the locality where the largest number of lepers is found. If San Francisco and the Pacific Coast constitute a district where leprosy may be contracted, the condition becomes infinitely graver than if the leprosy was altogether imported. It would appear from some of my observations that leprosy may be contracted on this coast.

In April, 1892, I published the case of an American, who died of tubercular leprosy in the San Francisco pest-house, and who, as nearly as I could find, had acquired his disease from the Chinese either in Nevada or California. This man was born in Massachusetts, and had never been out of the United States, except for a few hours in passing from Buffalo, N. Y., to Detroit, Mich., on a railroad. He had cohabited a great deal with Chinese, and at one time had had charge of a gang of Chinamen on the Central Pacific Railway, in Nevada. He died Feb. 29, 1892. He had noticed the first symptoms of his disease as areas of brown discoloration on the body and limbs about seven years before. His case has, up to the present, remained unique in my experience as being a native-born American whose malady was evidently contracted west of the Rocky Mountains. I have, however, run across several alien-born patients who, on account of their long residence in the United States before showing symptoms of their disease, might therefore be suspected of having acquired their leprosy here. A notable instance of this was a man named Samie Maiken, a Hindu, and a leper of the anesthetic type, who died in the San Francisco pest-house July 9, 1895, at 69 years of age. He had lived in San Francisco for about ten years when he went to Virginia City, Nev., where he first noticed his hands were affected. He, like the before mentioned American, had consorted much with the Chinese, working with them as a laundryman. He had also cohabited much with Chinese prostitutes.

As far as the Chinese themselves are concerned, I have only found five who were long enough in America before the development of symptoms to allow one to infer that possibly they had acquired their disease in this country. One of these was a prostitute, 29 years of age, who came from the village of Sun Ning in the See Yup district of the Province of Kwang Tung. She told a rather romantic story of how, in a raid of the Hak Kah, she had been stolen at 15 years of age, and sold into slavery and brought to San Francisco, where she remained for six months. She was afterward sent to Salt Lake City, Utah, where, after a time, she bought herself free. She arrived in America in 1877, and it was not until 1888 that she first noticed the disease, which appeared as a small tubercle on the nose. She is still alive, a horrible picture of tubercular leprosy, in the San Francisco pest-house.

A Chinaman, named Chung Kan Foke, a native of the Province of Kwang Tung, came to San Francisco in 1876, where he remained for eight years. He then went to Nevada and worked in a silver mine, and it was in that state, in 1892, sixteen years after leaving China, that he first noticed tumefactions in the face, the first symptom of leprosy. When I examined him in February, 1894, he was suffering from tuberculo-anesthetic leprosy.

Another Chinaman, named Ah Lung, from the village of Sang Chow, in the district of Sun Ning, Province of Kwang Tung, by occupation a waiter, came to America in 1882, and it was not until 1895, thirteen years after he arrived, that he first noticed discolored patches in his face, the first symptoms of his disease. When I first saw him, in March, 1897, he was suffering from leprous infiltrations and neural lesions.

Leong O You was a leper of the anesthetic type, 45 years of age, who, when first seen in December, 1897, said that he had first noticed the disease, which at first affected his hand, in March of the same year. He had come to America twenty-eight years before.

Quan Chew, a cook, aged 44 years, and a native of the village of Clack How, in the district of Hoy Ping, Kwang Tung, had come to America twenty-five years before, at 19 years of age. He was a leper of the anesthetic type, with commencing leprous infiltration in the region of the left eyebrow. He had noticed the first symptom of the disease as a pain in the left knee-joint, extending down the front of the leg. This pain had come on after he had been in America nineteen years.

In drawing inferences from the foregoing aliens, consideration must be given to the long latency of leprosy. According to Hallopeau, even thirty-two years may elapse between contracting the disease and its first manifestations[2]. Such very long latencies must surely be exceptional, however.

*Presented to the Section on Cutaneous Medicine and Surgery, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

[1] Hallopeau: Annales de Dermatologie et de Syph., vol. viii, p. 996.

[2] Hallopeau: Ibid, p. 997.

A. von Bergmann has recently made some statements in regard to the increase of leprosy in Riga, and these are illustrative of what may be happening on the Pacific Coast. Riga, a city of 250,000 inhabitants, is the most active trade center of the Russian Baltic provinces. Von Bergmann says that undoubtedly in the Middle Ages there was leprosy in the city, but in the course of time it died out, and the last leper hospital was closed two hundred years ago, and Riga was for years as free of this scourge as either Berlin or Vienna. The very knowledge of it had vanished, and the writer says that when the older practicing physicians are now shown a case of leprosy they claim never to have seen anything before resembling it. The registers of the hospital show, however, that since the beginning of the sixties, two or three patients a year have been admitted as lepers, but they were mostly from outlying districts. Between 1870 and 1880, however, inhabitants of Riga were registered as lepers, and after this the number increased rapidly, for in the years 1881 to 1886, twenty-seven patients were admitted, and from 1887 to 1890, sixty-four. According to von Bergmann, the facts seem to be that Riga was free of leprosy with the exception of a few patients who came in from outlying towns, and that these patients failed to spread the disease in the city because conditions were not favorable to its propagation. These conditions we do not know; we do not know why certain contagious diseases spread with amazing rapidity in some years or in a series of years, then subside or die out altogether.

This is the very point of the present paper, for the region west of the Rocky Mountains seems not alone to be the recipient of a large number of lepers from outlying leper countries, but the disease appears to be capable of propagating itself in this country. The number of incoming lepers to the Pacific Coast from foreign countries must necessarily grow larger, with our increasing territory and increasing trade, but no statesman would ever think of curtailing trade or failing to annex territory for fear of the spread of such a mildly contagious disease as leprosy. The remedy must be in the segregation or deportation of those lepers we have, and the more stringent examination of immigrants from leper countries.

(*For Discussion see Page 211.*)

SOME QUESTIONS RELATIVE TO THE DIAGNOSIS OF ANESTHETIC LEPROSY.*

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In 1895 I presented to the Ohio State Medical Society[1] two sisters, natives of Ohio, who manifested appearances of anesthetic leprosy.

In reporting the cases I maintained the view that the symptoms they presented accorded with the descriptions of leprosy that I had read, and would not harmonize with the phenomena of any other disease. Although this view of the cases has been called into question, nothing in opposition to it has thus far been advanced which satisfactorily convinces that it is erroneous. It is with the belief that you will aid in finding where in the list of diseases these cases properly belong that I review them here.

The mother states that in the one daughter, Hannah, the first indication of disease was a swelling in the front of each leg, which occurred in childhood, a short time, perhaps a few months, after she began to walk. The swellings suppurated and healed. In two or three years after this time the toes began to ulcerate and come off. Afterward the ends of the fingers ulcerated, exposing the bones, which were painless, and when slow in separating were clipped with shears. From this condition the disease progressed until the cases were reported in 1895. She was then 18 years of age. She had lost toes, some entire and others in part only. She had lost the distal phalanges from most of her fingers, and the left hand was spontaneously amputated. The legs were thickened and anesthetic—thermal anesthesia being especially marked. She had a deep plantar ulcer on which she walked without any pain. The discharge from any ulcerations she had was quite offensive. There was a pemphigus-like blister on the right arm, just above the olecranon, the seat of which was devoid of sensibility. The forearms and hand were also anesthetic. The tongue, the left side of the lower lip, and both wings of the nose had been ulcerated but were healed. This was her condition in 1895. The only time I saw her since then was in July, 1896, by which time she had suf-

fered some further phalangeal losses. She died in April of this year, I think of pneumonia. Her younger sister, Hattie, has shown the disease for about seven years. Some of her toes are entirely gone and the ends of some of her fingers are lost. There is an ulcer in the plantar surface, at the middle of the heel. It is indolent and rather dry, so one can see into it. It would admit a lead pencil for nearly an inch. The mother states that it came a number of weeks ago, from stepping on a nail. The foot is also swollen and inflamed, from the formation of an abscess which has opened in the top of the foot, an inch from the base of the second toes. A horse stepping on the foot is given as the cause of this. Notwithstanding the painful-looking condition of the foot, she walks with but little inconvenience. There is thermal anesthesia over the outer malleoli and for a little way above. In the hands she can not differentiate between heat and cold. There is some thickening of the left ulnar nerve.

There were eight children in the family and the only ones thus affected are Hannah, the fourth child, and Hattie, the youngest. The father was a soldier in Georgia, during the Civil War. As opposed to the diagnosis of leprosy in these cases it has been suggested

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[1] See Journal, xxv, 762, 1895.

that fifteen months is an exceptionally early age for its development. This is no doubt true, although the incubation period for leprosy is given wide range and is stated to vary from only a few months to many years. While the mother says that abscesses developed in the child's legs a few months after she began to walk, she also says the toes did not begin to ulcerate until two or three years after that time. It does not seem improbable that the abscesses may have had nothing to do with her present disease and therefore did not mark its beginning. It seems true also that the mother's recollection of dates and the sequence of events is not unquestionably clear, and it is not improbable that she may be mistaken. The fact that on examination no lepra bacilla were found in the amputated hand can not militate as has been said, against the diagnosis of anesthetic leprosy, because in this form of the disease their presence can but exceptionally be demonstrated. Dr. Albert S. Ashmead has published (JOURNAL, Nov. 16, 1896) a letter writtten to me concerning these cases, in which he said: "I do not consider them lepers. Colles' law, I think, proves them to be syphilitic. Certainly if they were lepers, the mother would have been infected too."

These statements, though made by so distinguished an authority, fail to convince me, for I can not understand how any use can be made of Colles' law in determining the character of these cases. If I correctly interpret what I read concerning leprosy, it is not an inherited disease, but is contagious or communicable—always the result of contaminating contact. If this be true, as the facts adduced seem to prove, Colles' law can not be invoked to our help. It can not be maintained that if a mother's children are sick and she remains apparently well, they therefore must be sick with syphilis. The statement that "if they were lepers the mother would have been infected too" is surely in contradiction to the prevalent opinion based on the study of leprosy in this country. Even in countries where the disease flourishes and the conditions for its spread seem most favorable, this statement would appear to be wholly unwarranted by the facts. Syphilis with all its protean manifestations has, so far as I am able to learn, failed to produce cases to which these conform. Syringomyelia has not, heretofore at least, furnished such examples, especially as regards the order of development.

It must be admitted that the circumstances under which the cases developed are unusual, and this may be the greatest cause for doubting that they are of leprous character. If these girls had lived in a leper country or had been associated with known lepers, there would probably be little doubt that they nicely illustrated the disease.

The father had a chronic affection of the nose, and I can base the origin of the cases on no better theory than that he brought the disease from the South. But as the bacillus of leprosy is long-lived it may possibly be transported great distances to some one susceptible to its influence.

DISCUSSION ON PAPERS OF DRS. MONTGOMERY AND M'DOUGAL.

DR. BISHOP, New York City.—The general practitioner is very much interested in leprosy, always, and when he gets hold of a case he generally shows it around. Last winter I borrowed some cases from Dr. Fox and showed them at the session of the general academy, and they excited much interest. General practitioners, myself included, do not know these conditions until they are brought before them. I think many of these cases abound and many people might be saved from infection if these patients were more generally recognized.

DR. A. W. BRAYTON, Indianapolis, Ind.—Concerning the point made by the last speaker, I never saw but one case which it occurred to me might be construed by the general physician as leprosy, but really was not. It was a case of lupus mutilans, infantile lupus, in which the fingers were almost destroyed. I was showing the case to Dr. Corlett of Cleveland, Ohio, and he remarked that of all the cases of lupus resembling leprosy this was one which he could most willingly forgive the ordinary practicing physician for pronouncing leprosy. There were large shiny patches where the lupus had spread over the skin, which were not found in anesthetic leprosy. I think the destruction of the hair follicles never occurs in leprosy.

DR. A. E. CARRIER, Detroit, Mich.—What is the nationality of the parents?

DR. J. G. MCDOUGAL.—The grandparents and parents were natives of Ohio. They could not tell me further than that. Their people, however, are generally healthy and reach old age.

DR. A. E. CARRIER.—Was there anything peculiar about the mouths of the children?

DR. J. G. MCDOUGAL—Not anything characteristic of syphilis; although there had been some ulceration of the lip and tongue and some loss of lower jaw in the older girl, which had healed at the time I first saw her. There were six children besides these two, and none of them showed any evidence of syphilis. The husband never underwent any antisyphilitic treatment; and there had been no miscarriages.

DR. A. E. CARRIER—Are these two children that followed?

DR. J. G. MCDOUGAL—No; the older one is the fourth in a family of eight, and the other is the youngest. Between them were three healthy children.

DR. R. R. CAMPBELL, Chicago.—What did your treatment consist of?

DR. J. G. MCDOUGAL—I never gave them any treatment. They were never patients of mine.

DR. BISHOP—I can say that I saw these patients a few years ago, and I would not like to rule out syringomyelia. I had a case where the fingers and toes were more or less lost. The patient was a scrub-woman who had burned herself at various times and for that reason had lost the fingers. She had the anesthesia in the heat sense. These may be cases of myelia.

DR. J. G. MCDOUGAL—I would like to inquire of the Doctor whether it is true, as stated by writers on the subject, that syringomyelia affects the upper extremities only; or at least that it always *begins* in the upper extremities.

DR. BISHOP—I think that it is such a rare disease there could not be any rules laid down.

DR. L. DUNCAN BULKLEY, New York City—I will first speak about the sporadic cases of leprosy which we undoubtedly have in this country. Thirty-odd years ago a patient came from the neighborhood of Poughkeepsie, N.Y., before the Dermatological Society, when it was first founded. Dr. Boeck of Norway, who was there, confirmed the diagnosis of leprosy. The patient had never been from the vicinity of New York; had never been in a leprous country, and lived at home with his family. He was under my father's care, and finally died a leper, without communicating it to his family or to others. Shortly afterward I had another patient who had never been away from the neighboring territory. He came, I think from New Brunswick, N. J. The case came before one of the medical societies and was recognized as leprosy. It was largely anesthetic, and not of the mutilating form. There was some clubbing of the fingers and large tubercular lesions, of the anesthetic form, over the entire body. He lived with his family, and there were certainly no cases ever communicated from that one.

While I was house physician in the New York Hospital, thirty years ago, there was a leper there who had entirely lost his fingers, to the metacarpal bones, and his face was frightfully disfigured. He would talk by pushing up his upper lip. While there he was transferred to the surgical side and had one foot amputated without an anesthetic of any kind. He was very much interested in seeing that a perfect job was made of it, but they made no better job than nature had made with the fingers. There was no pain whatever. There were no precautions taken against infection, and this was long before the days of antiseptic surgery. That was thirty years ago and there has been no case of leprosy developed in New York City since that time, that I know of, and I have kept watch—there

have certainly been no cases developed from these. The patient certainly did not give it to others in the hospital, and he was there for six months or a year. That tells the story with regard to the danger of infection from leprosy in this country. One evening, some years ago, there were thirteen cases of leprosy exhibited at a meeting of one of the New York societies. The New York Skin and Cancer Hospital is hardly ever without one or two lepers in its wards. We now have two, one with anesthetic patches on the back and sides, gotten from the tropics; and the other an old man with tubercular leprosy. He has improved vastly, having been with us more than a year.

A MEMBER—What is the treatment?

DR. BULKLEY—Chaulmugra oil and quinin.

MEMBER—Any local antisepsis?

DR. BULKLEY—No; no local antisepsis, and no precautions taken. Some years ago, at Fordham, we had a leper, a young man of considerable wealth and position. He had a private room, became totally blind and lost one or two fingers. It was the mutilating, anesthetic and tubercular form. He was with us six months or a year. Finally his nurse went away with him, suddenly, and lived with him, and he lived a year or so. There have been no cases from that one. I do not suppose there has been any time during a period of twenty or thirty years, that I have not seen some cases of leprosy. At San Francisco I saw a dozen cases, in many different forms. In this section of the country particularly, there is absolutely no transmission of the disease from one person to another.

I do not know how many are acquainted with the facts of the existence of Norwegian leprosy in northern Minnesota. For many years many leprous Norwegians have gone there. About ten years ago somebody came over from Norway and traced up the names and histories of some dozens of them—he went and saw them at the different towns. His statement then was that there had been no new cases developed there; also that the children did not have leprosy—the lepers were dying out and they were preventing more from coming, and there were fewer there than were to be expected from the importation. It has not spread in Minnesota.

This condition does not seem to be true about the South, if we can believe Dr. Dyer. Cases now and again develop sporadically in Louisiana. On the other hand Dr. Elliott, of New York, my assistant at the New York Skin Hospital, formerly at the New Orleans Hospital, claims that they always had cases of leprosy in the General Hospital in New Orleans twenty years ago, and they never regarded them as contagious; they had no fear of them. I think that in the warmer climates there is some danger of leprosy extending. The disposition of the problem should not be in their segregation; but we should not let them land here. They are no more use than blind, lame, halt, imbecile, or crazy persons.

With regard to these very interesting cases, I can not make up my mind that they are leprosy. As I said, I have seen a good many cases of mutilating anesthetic leprosy. Nor from my experience could I say it is syringomyelia. I do not know that I have ever seen more than one case of the latter, and I do not think we have enough literature on the subject to say that it is confined to the upper extremities. As I understand, these patients had no eruption except on the front of the leg and on the side of the face, which would afterward slough off. I should exclude that as a leper lesion. I do not know that under any conditions, when once developed, the lesions leave entirely. They get smaller and larger but they are there to stay.

I do not think one could, by any imagination, connect syphilis in any of its forms with these cases. I would like to inquire how much difference there is in the ages of the two patients?

DR. MCDOUGAL—About ten years; one is the fourth, the other the youngest child. There are three between.

DR. BULKLEY—That would exclude the probability of hereditary syphilis—to have three well children between them, and develop in this youngest child.

There is an interesting point which perhaps counts somewhat against my exclusion of leprosy in these cases, and when this diagnosis was suggested I could not help thinking of some recent developments in regard to the modes of communication of leprosy. The idea that it is taken in through the nasal passages, as consumption is, is gaining. It is believed that 90 per cent. of tubercle bacilli which get into the lungs are inhaled. In the same way it is claimed that the effluvium carrying the leprosy bacilli is carried in the winds and finds entrance through the nasal passages.

In leprosy countries all the doctors say that it begins with a bad cold. The patient will say, "I had a bad cold and ever since I have had this disease." The bacillus of leprosy is well known: the bacillus lepræ very much resembles the tuberculosis bacillus, and it is a question whether most men could tell the difference. It takes the same stain as the tuberculosis bacillus. I have examined specimens from every portion of the body.

So, I say that this is an argument against my own diagnosis of the cases; there is a possibility of the father having had mild leprosy, and these two children may have gotten the infection by inhalation. That is within the bounds of possibility. The cases are certainly extremely interesting, and I am glad to have seen the picture.

DR. A. E. CARRIER, Detroit, Mich.—As far as the difference in the ages of the children is concerned, and the fact of healthy children being born between them militating against the cases being syphilis, I think there are cases where syphilitics have healthy children, exceptional cases; but I am not making any claim for these being cases of syphilis. As an illustration, I have a patient who is suffering with syphilis. She has been treated for lupus for three years. In my examination I found that she was nursing a child ten months old, and so far it has not given any evidence of the disease. Under syphilitic treatment, her face, which was completely covered with the lesion, has entirely healed. While she gives no history of a primary lesion, I have no doubt, from the result of the treatment, that she was suffering from syphilis. It is not too late for the child to show signs of the disease, and while absence of it in the child might be one reason for the exclusion of syphilis in the mother, it is not a positive reason. I am sure I can not tell what the disease is.

DR. A. W. BRAYTON, Indianapolis, Ind.—I will ask the Doctor whether there is not a strong possibility of this being Raynaud's disease. This should be kept in mind.

DR. MCDOUGAL—My understanding of Raynaud's disease is that the anesthesia is confined to spots which become afterward necrosed—to spots about to become gangrenous.

DR. R. R. CAMPBELL—I will ask you for an explanation of the different degrees of coloration in the legs?

DR. MCDOUGAL—This eruption did not appear until 1895. It was of a dark brownish color, eruptive spots not raised, thickly set, giving the skin a dappled appearance, as shown in the photographs. These cases have been more fully reported in THE JOURNAL of Nov. 2, 1895. I am not so thoroughly convinced that they are cases of leprosy, but I think that leprosy has not been satisfactorily excluded. The only objections heretofore made to the diagnosis of leprosy are the ones to which I referred in my paper. The theory of syphilis has been the most strongly urged as an explanation of the condition, but it seems improbable. The manifestations of syphilis have been observed for centuries, and yet these cases would be unique. Besides, in a family of eight children born in close succession, the fourth and the last are the only ones manifesting any constitutional taint. Dr. William Thomas Corlett, of Cleveland, Ohio, recently saw with me the girl yet living, and I am sorry he is not here to express his opinion concerning this case. I hope he will pardon me for stating that he was impressed with the notion that it was leprosy; although he did not then feel justified in making an unqualified diagnosis. He may yet favor us with the advantage of his maturer judgment. He made some negatives of the hands and feet. The feet have become quite badly mutilated by the loss of toes. I hope the character of these cases may yet be positively ascertained, and, if it is, I hope it may be found to be some other disease than leprosy, for it would seem a menacing disclosure to learn that the bacillus of leprosy can be carried from a distant place to a fertile soil in the interior of the United States.

Marange calls attention to the fact (*Sem. Méd.*, December 4) that granular pharyngitis is only a manifestation of arthritism and treatment should be directed to the latter to attain a permanent cure.

PROBABLE BRAIN TUMOR WITH RECOVERY.*

BY W. A. JONES, M.D.

MINNEAPOLIS, MINN.

The case which I have the honor to present belongs to that interesting category where complete recovery of the patient leaves the question of diagnosis forever in doubt. The patient, P. Q., a male of 16 years, was referred to me by my friend, Dr. J. H. Dunn, of Minneapolis, Sept. 18, 1897. He had been taken ill four days before, with what appeared to be an ordinary attack of indigestion accompanied by severe headache, but his symptoms had grown steadily worse and at that time pointed to the presence of a cerebral lesion.

Inquiry into the family history shows it markedly neurotic. The patient's father, always a very active business man, a continuous worker, very excitable, is occasionally subject to short, but violent outbursts of anger; otherwise he is well and has never suffered from any prolonged constitutional disease. His father died in early life, from the result of an accident. His grandmother died before the age of 30 of consumption, and an uncle also died of the same disease. Two of his aunts are living and well. The patient's mother is unstable, irritable and excitable and suffers from a valvular heart lesion as well as from chronic eczema, yet claims that she enjoys good health. Her father died hemiplegic, at 65, her mother at 76, of acute bronchitis. A brother died from some form of paralysis, and a sister of eclampsia at childbirth. The patient is the second of four children, all of whom, except the older sister, have large heads, asymmetric in shape, but evidently not rachitic. They are also anemic and of the spindle type. The entire family are apparently slightly defective and probably suffer from the so-called scrofulous diathesis or, perhaps, better stated, all are highly neurotic.

The patient has always been wilful, quick-tempered, and irregular in his habits, working at times with physical vigor and enthusiasm, in his studies occasionally inclined to overdo, and at other times being indifferent and unsettled. During the summer of 1897, he spent a few weeks in the Yellowstone Park, with a camping expedition, and was subjected to hardship and exposure. He returned very much reduced in weight, showed marked signs of impoverishment of nutrition and was extremely irritable. During the same summer he attempted to make up preparatory work for the university, and applied himself very closely to his studies, while at the same time he rode his bicycle to excess. He complained occasionally of dull headaches, which were supposed to be due to errors of diet and exercise, as they disappeared in a few days after rest and care.

On Sept. 14, 1897, without any special cause, except a difficulty of digestion, he complained of intense headache, was nauseated and vomited. During the day he had several attacks, but on the following day was very much better. The third day, however, his headaches returned with increasing severity, accompanied by nausea and frequent projectile vomiting. He then complained of a pain over the frontal region, more particularly over the right eye. I saw him for the first time on September 18. He complained of constant boring, intense pain over the right orbit, was intolerant of light, intensely irritable and still nauseated. His pulse was 48 and his temperature subnormal—97. He had pain on percussion over the right orbital region; he had been put through the usual course of cathartics and intestinal antiseptics without benefit, but was relieved of his pain by a small hypodermic of morphin.

The following day found him no better. He cried out in paroxysms of pain, demanding firm pressure over the right eye, complained of vertigo on movement of the head, and also exhibited violent temper and great profanity. The pulse continued slow and his temperature remained subnormal. During the following week there were no marked changes until the tenth day of his illness; he then showed a paresis of the internal rectus of the right eye, while the pupil was slightly enlarged and did not respond promptly to light. The left pupil remained unaffected. He was at times ungovernable, cursing and swearing and showing frequent outbursts of temper, particularly toward the nurse and his father. He was rather slow to respond to questions, the pulse became irregular but continued slow, ranging from 42 to 52, and the temperature continued subnormal. He had occasional attacks of nausea and vomiting, projectile in type, and containing partly digested food. The pain was relieved by occasional small doses of morphia, not more than a quarter of a grain, however. He continued in this condition for about ten days longer, when there appeared a paralysis of the external rectus of the left eye and a mild hemiparesis of the left side of the body, including face, leg and arm, with increased knee-jerks and ankle-clonus on the same side. There was also a partial anesthesia of the right face above and a little below the orbit, but not extending to the lower half. The sensation on the left side was normal. A consultation of physicians included Drs. C. J. Spratt, H. L. Staples, and Arthur Sweeney. At this time an ophthalmoscopic examination was made, and showed a well-marked neuroretinitis in both eyes. The same train of symptoms continued until the middle of October, with occasional remissions, but still no change in the condition of the pulse or temperature, except that when violently excited the pulse would go up to from 60 to 90 for a short time and then drop back to the old standard of 42 to 52.

During the first month the temperature did not reach above 99. The greater part of the time it was 97. After the first month, when convalescence was established, the temperature occasionally rose to 100.5. Gradually he began to improve. The pains lessened in severity, the vomiting ceased, he became tolerant to light, and the pupils once more responded. The ocular palsy and the hemiparesis disappeared. The neuroretinitis subsided by the middle of November. His emaciated condition began to improve and by the middle of December, or three months after he was first seen, he was practically well.

The diagnosis was a matter of extreme difficulty, but from the general symptoms of headache, vertigo, vomiting, the ocular palsy, the left-sided paralysis, the ankle-clonus and increased knee-jerk, the subnormal temperature and pulse, together with his extreme irritability, a tumor seemed the most probable explanation of the trouble. Although many of the symptoms appear to be in line with brain syphilis, we could elicit no such history. The matter was gone over carefully with the father and mother, the boy was closely questioned at various times during and after his illness, yet all of the physicians were satisfied that specific infection could be excluded. Hereditary syphilis was also excluded, since there was no evidence of previous

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mental weakness or convulsions, or previous disease of either eye, ear or teeth, and since there was present paralysis of the cranial nerves and the opposite side of the body. Meningeal inflammation was also eliminated by the absence of any infectious process and of the characteristic symptoms. Brain abscess was considered, but was excluded on the ground that the boy had suffered neither from suppurative disease, infectious fever nor injury. Although the symptoms were those frequently found in brain abscess, namely, irregularity in the course of the disease and the distribution of the symptoms, it seemed reasonably safe to exclude it from the diagnosis. For many of the same reasons, acute exudative encephalitis appeared improbable. There was no infection, there was total absence of coma or convulsions, and there was present a low temperature and a slow pulse-rate. Embolism was excluded on general principles, as there was no sufficient cause for its occurrence. The urine was frequently examined, but neither casts nor albumin were present, and although there was a diminution of chlorids, his condition was not uremic. The possibility of a neuritis of the cranial nerves was also discussed, but the symptoms seemed too wide-spread and numerous to warrant such a diagnosis.

With the probability of tumor in mind, and the absence of any specific history, the conclusion finally reached that the neoplasm was of tubercular origin was based on the age of the patient, his neurotic temperament, the size and shape of his head, his general physical appearance, the rapidity with which the brain pressure symptoms developed, their progress and his very satisfactory recovery. The location of the tumor must be a matter of some dispute, but with the symptoms enumerated, the conclusion that it was in the pre-frontal region on the left side, near the orbital surface, seems most reasonable.

The treatment was interesting, for it was mainly experimental. The usual attention was given to the digestive apparatus, the bowels were kept freely open with calomel and saline, and the pain was eased by occasional hypodermics of morphia, since no coal-tar products proved to be of service. On account of the slow pulse and its frequent irregularity, he was given hypodermics of strychnia, 1-30 grain t. i. d. An attempt was made to put him on iodids and bromids, but he was unable to retain them as they produced so much stomach disturbance. It seemed advisable, however, to give him iodids, and this was done by inunction. For three consecutive weeks, beginning on September 25, he was rubbed every twenty-four hours with an ointment containing 4 gr. of the red iodid of mercury and 21 drams of iodid of potash, dissolved in hot water and lanolin. This means 1230 gr. of iodid every twenty-four hours for three consecutive weeks. After this the inunction was gradually reduced in quantity until the end of the second month. It was finally discontinued and he was given Blanchard's syrup of iodid of iron, which, together with the care and nourishment, constituted the entire treatment. He was kept in bed continuously for two months, then allowed to get up and about.

I have seen him at intervals since his recovery and he is now in the best of health. His convalescence was slow after the acute symptoms had subsided, but during the last year he has grown, and has developed in all directions and is apparently sound and well.

DISCUSSION.

DR. F. SAVARY PEARCE, Philadelphia—The author's case admirably illustrates the advantage of using the iodids in full dosage, in this way causing absorption, which at times produces remarkable results by temporarily allaying symptoms which are due secondarily to the inflammatory condition and resultant exudate.

DR. F. W. LANGDON, Cincinnati, Ohio—While the tumor may remain quiescent, we know that the nervous tissue will accommodate itself to a wonderful amount of pressure, and occasionally cases come to autopsy in which the history has dated back seven or eight years. I myself reported a case of cerebellar tumor in which there was a clear history for seven years, of vomiting, deafness, vertigo, with occasional periods of apparent comfort, and yet the autopsy showed the growth as large as an English walnut. The tumor, however, was not a tubercular one, but simply a fibroma.

DR. W. J. HERDMAN, Ann Arbor, Mich.—There is a possibility of a tubercular tumor remaining latent for quite a time, and subsequently giving rise to pronounced symptoms. I have one brain in which I found seven growths at the autopsy. Fortunately the first one, which was cerebellar, and about an inch in diameter, had become encapsulated. Those that caused the death were in the temporal and in the frontal lobes. The time during which these tubercular growths were developing in the brain covered as long a period as five years. There is a possibility of being months or years in which you would have no symptoms, and yet considerable progress be made in the development of such growths in the brain.

DR. CHARLES H. HUGHES, St. Louis, Mo.—There can be no doubt about the accuracy of the diagnosis so far as the existence of some form of tumor is concerned. It is not an uncommon thing for these exudates of venereal disease to be removed under treatment. It is not so certain about the removal of gliomata. Some years ago I had an experience with cerebral tumor that influenced me in after life in the treatment of these conditions. That was the case which McLane Hamilton incorporated in his "Diseases of the Nervous System." It is not the tumor itself in cases of cerebral tumor involvement that gives rise to the symptoms, but the secondary conditions developed in the brain by the presence of the tumor. The alterations in circulation that give us the appearance in the fundus of the eye may be produced by other forms of cerebral irritation, exciting the circulation and in this case of cerebellar tumor the patient surprised me by getting from his bed and walking about the streets unaccompanied and without the characteristic gait, without the vertigo and without any of the cerebellar symptoms. Under general treatment, rest of the man, and large doses of bromid of sodium, the conditions which seemed to have developed the symptomatology of the patient disappeared, and so confident was the family physician and the wife of the patient that the man was cured that they had made arrangements to discontinue the treatment. He had the intense occipital headache and the vertigo and got rid of all those symptoms.

DR. W. A. JONES—I presume that if the diagnosis is correct I will probably have more trouble with the case. The condition of the fundi entirely cleared up after the patient was under treatment three months.

SYPHILIS FROM DENTAL INSTRUMENTS.

BY WILLIAM L. BAUM, M.D.

Professor of Skin and Venereal Diseases, Post-Graduate Medical School Chicago; Attending Dermatologist at the German Hospital, Post-Graduate Hospital; and Fellow of the Chicago Academy of Medicine.

CHICAGO.

My interest was particularly attracted by experience with the following cases:

CASE 1.—On Oct. 9, 1896, there appeared at my office a young man, 28 years of age, who came to consult me about a peculiar skin eruption which had caused him much annoyance, not because of any irritation at the site of the lesions, but rather because of the consequent disfiguration.

He gave the following history: He was an Ameri-

*Presented to the Section on Stomatology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

can; had been practicing dentistry for four years; was married and the father of two children; had never suffered from any serious disease, and had never had a skin eruption before; there was no history of gonorrhea or chancre. The present eruption occurred about two weeks previously in the form of small red blotches, erythematous in appearance. It was accompanied with violent headache and a feeling of general debility. Since then small papules appeared on the chest, back, face, and extremities, and also on the scalp. There was general indolent adenitis present. The patient could not remember any particular lesion preceding these, except a very stubborn small sore upon the index finger of the right hand, near the matrix of the nail. This he explained by saying that he had accidentally scratched himself in this place with a dental instrument while filling some teeth for one of his patients. The epitrochlear and axillary glands upon the right side were much enlarged and somewhat tender to the touch. There was no doubt that this dentist had syphilis, and that his infection was either from a scratch with one of his instruments previously used upon a patient with syphilis or infection of the wound from the patient upon whose teeth he was working at the time. The latter theory he scouted, saying that she was a very estimable woman, a social leader, and one in whom it would be almost a crime to suspect the presence of disease. This last remark only too frequently presents the view of many members of our profession, as well as dentists, forgetting as they do that syphilis is a wide-spread disease, and that it is not necessarily a reproach to its unfortunate victim, but often, perhaps more often than believed, innocently acquired.

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CASE 2.—A man, 29 years of age, a bookkeeper by occupation, appeared at my office in December, 1894, with an erythematous eruption of the skin, and complaining of some soreness of the tongue and throat. He gave the following history: During the last week of September and the first week of October, he had occasion to have considerable dental work done, in the course of which his tongue was slightly injured by a dental instrument. The wound apparently healed in a few days, but ten days later a small nodule was perceptible on the site of the wound. This became somewhat painful and increased in size. At the same time the glands of the neck became enlarged and painful; the nodule broke down in the center. This excavated erosion was surrounded by a hard, infiltrated zone. There was general enlargement of the lymph-glands. A diagnosis of syphilis was made, and the patient made a rather uneventful recovery.

CASE 3.—A man, aged 22 years, came to the clinic of the Post-Graduate School in January, 1895, with a large papillary syphilide. The glands in the neck were very much enlarged, and there was a sore upon the lower lip, at the internal border of the mucous membrane at the right side. He had not been exposed to any infection that he knew of. He had been under the care of the dentist for some weeks, and remembered sustaining a slight injury during the course of the dental work.

CASE 4.—A woman, aged 35 years, married, the mother of five children, in October, 1895, consulted me on account of falling out of the hair and a slight eruption, typical symptoms of syphilis being present. She gave a history of a sore appearing upon the tongue, and of having received an injury during the time she was under the care of her dentist. Her husband was healthy.

CASE 5.—A girl, aged 15 years, had frequent attacks of tonsillitis with subsequent hypertrophy of the tonsils. They were removed by a laryngologist. The base of the right tonsil remained sore for some time. It became quite painful and hard. Two weeks later all the glands, submaxillary, sublingual, and cervical, became much enlarged and slightly tender. Eight weeks after the removal of the tonsils, the patient noticed the first eruption. Consultation with the laryngologist revealed the fact that he had not been in the habit of boiling his instruments, and had, according to his case-book, removed a tonsil a few days before the above-mentioned operation with the same tonsillotome.

CASE 6.—A man, aged 47 years, an express-driver, in September, 1897, first noticed a small, hard lump on the edge of the upper lip on the left side, near the margin of the mucous membrane, which became hard and was accompanied by considerable swelling. The patient remembered that a few weeks before he had received an injury at this point, while under the care of a dentist. The glands generally were enlarged, maculo syphili present.

It must be remembered that in all these cases there is a possibility that the infection might have occurred from the transmission of syphilitic virus by means of drinking utensils, pipes, etc., soon after the injuries were received, although this is scarcely probable.

Fournier, in his work[1] collected 1124 cases of extragenital chancre; of these, 847 appeared in the region of the head, most of them being localized about the lips, tongue, tonsils, etc. The syphilitic manifestations in the mouth may be divided into three kinds: 1, the initial effect or chancre; 2, the secondary lesions, such as erythema, mucous patches, etc.; 3, the tertiary symptoms, such as gumma.

Chancre of the Lips.—In this region it may begin as a fissure, or as a small, hard papule. In a few days this lesion becomes markedly indurated, and in about two weeks the sublingual and maxillary glands become enlarged, those nearest the chancre becoming most enlarged.

Chancre of the Tongue.—This is not so frequent; it usually is found on the dorsal surface, the sides, or the tip. It generally consists of a hard, round, or oval lesion, the surface later undergoing erosion, being surrounded by a hard or indurated zone. The glandular enlargement occurs the same as in the labial chancre.

Chancre of the Tonsils and Fauces.—This is not so common, and is usually recognized late. It is characterized by considerable swelling. The surface is covered by a tenacious yellowish-white secretion, is extremely painful, and its period of exulceration is marked by a decided destructive tendency since it is usually accompanied by streptococcus and staphylococcus infection.

The secondary lesions have the following course:

Erythematous Syphilide.—This occurs on the mucous membrane, often coincident with the eruptive fever. The mucous membrane covering the soft palate, uvulæ, and tonsils—this terminates at the line separating the soft from the hard palate—is livid in color.

Papular Syphilide.—This syphilide of the mucous membrane usually accompanies the secondary papular manifestations of the skin, although it may be present at any later time. It appears as an erosion, sometimes as an ulceration, at others as a scaly patch. Those papules that are situated on the anterior surface of the velum and anterior arch of the palate are the best developed. They undergo degeneration very quickly, causing circular turgid spots, or, where the degeneration penetrates deeper, a diphtheritic pseudomembrane will be

[1] Extragenital chancres, Paris, 1897.

found on the mucous membrane. (Zeiss.) Sometimes conical vegetations form upon the papules that are situated on the uvulæ or tonsils. The mucous-membrane papules are most frequently found on the tongue. Macular syphilides also frequently occur on the tongue.

Gumma.—This may attack the tonsils, soft palate, and uvulæ, causing much swelling, but little pain. Gumma of the soft palate may escape recognition and end in perforation. Syphilitic gumma of the tongue, which develops without causing pain, may be either in the mucous membrane or in the muscular structures. If it remains untreated, it will undergo disintegration, leaving an excavated ulcer behind.

The syphilitic contagion adheres to all textural elements, and textural detritus produced by suppuration or bionecrosis in consequence of syphilis. It is most abundant in disorganized syphilitic papules and the sloughing initial chancre. It may easily be carried by instruments, drinking utensils, knives, forks, cigar-holders, pipes, and by the hands, but there must always be some abrasion present or it can not be inoculated.

Every patient in whom the diagnosis of syphilis is made should, before the inauguration of antisyphilitic treatment by mercurials, be sent to his dentist, in order that any caries of the teeth be remedied, and gingivitis treated. These precautions are necessary, and when properly carried out the dangers of hydrargyric stomatitis thus are greatly lessened.

It is necessary that the dentist and oral surgeon, to avoid being the carrier of the contagion, and for his own protection, should possess a knowledge of the characteristic appearance of the different syphilitic lesions met with on the mucous surfaces of the mouth and fauces, and personally supervise the disinfection of his instruments by repeated boiling and immersion in formalin or creolin solutions.

It might even be well to keep some instruments for use upon syphilitic cases only.

This paper has not been written in a spirit of criticism of the dental profession. The small number of cases reported in a practice covering several thousand syphilitics, is rather a tribute to the care and asepsis ordinarily practiced by the great mass of the profession.

AN INTESTINAL SUTURE.*

BY RAYMOND CUSTER TURCK, M.D.

Professor of Anatomy and Operative Surgery in the Chicago Post-Graduate Medical School; Director of the Post-Graduate Anatomical and Surgical Laboratory; Member of Chicago Academy of Medicine, etc.

CHICAGO.

The "ideal" intestinal suture is one which will combine simplicity, strength, rapidity of insertion, and absolute insurance from leakage. Without going exhaustively into the relative merits or demerits of the various sutures now in vogue, I would like, however, to mention a few points regarding the one probably most widely in use at present, i. e., the Halsted suture.

In Diagram 1 are shown Halsted sutures inserted, but not tied. When the knot is tied the serous surfaces of the bowel are approximated, and cut edges inverted, but, not only do the sutures draw longitudinally on being tied, and thus draw the wound together, but at the same time they draw laterally, as indicated by the arrow-heads. This latitudinal tension tends to draw the sides of the sutures together, but at the same time draws the sutures away, each from the other, leaving weak points as indicated in Diagram 2. This necessitates the expenditure of considerable time in order to place the sutures very close together and thus avoid a leakage which would otherwise occur at these weak points.

In the new method, the Halsted suture has been utilized in modified form, as will be seen from Diagram 2.

The new suture might properly be called a "lock-stitch," because each loop is locked through the adjacent ones. The first suture is an ordinary Halsted, but a trifle wider than usually used. The succeeding sutures may be nearly twice as wide as the Halsted. Before the first

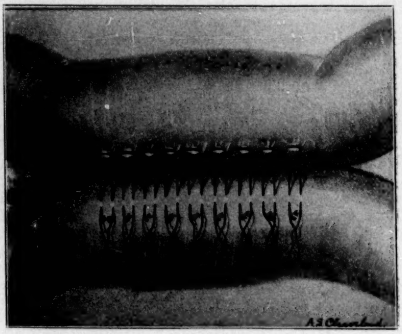

FIGURE 1.

is tied, the second is inserted, starting, however, on the opposite side of the wound, so that the knots will alternate on the loops of gut. The second suture is not placed beyond the first, as in the Lembert or Halsted method, but the first half of the second loop passes immediately inside the second half of the first loop, thus locking the two. As soon as the second is inserted, the first is tied, the third inserted, and the second tied, and so on. After the first suture is placed, each suture is

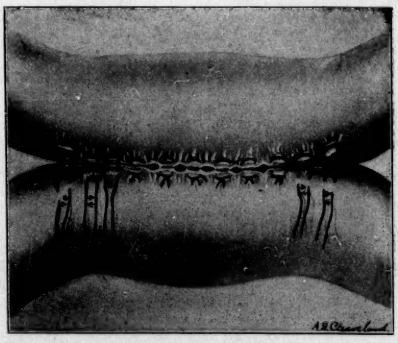

FIGURE 2.

passed *under the loop,* and *over the loose end* of the suture immediately preceding it, so that when all sutures are tied a complete chain is formed. In putting in each suture care should be taken not to pass the needle through the fiber of the preceding suture, otherwise it may be found impossible to draw the sutures tight.

With this, stitch-leakage is absolutely impossible. The loops A, B, C, D, E (Diagram 4), for instance, when tied are drawn in the direction of the indicated

*Read before the Chicago Academy of Medicine, Jan. 12, 1900.

arrow-heads. It is certain that the portions of bowel between the two sides of each loop are perfectly approximated, and also as each loop is locked with those on each side of it, the spaces between C and B, and between

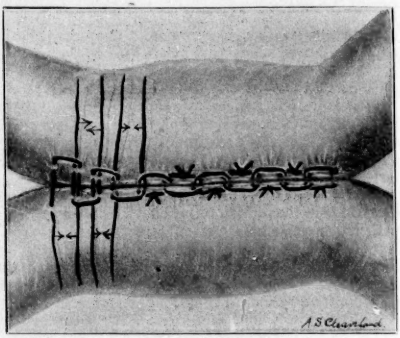

FIGURE 3.

E and D, are also completely closed, the lateral tension of the adjacent sides of the successive sutures drawing the wound together at these points, instead of apart.

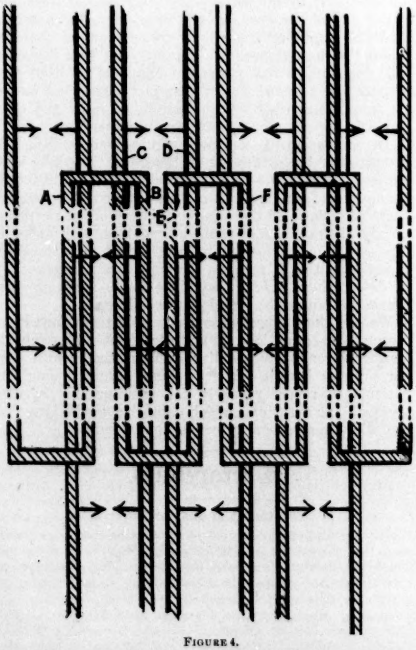

FIGURE 4.

The suture is obviously stronger than the continuous one, being interrupted, and stronger than the ordinary interrupted, because, from the method of insertion, each stitch supports its neighbors. It is *simple* and easy of insertion. It is much more *rapid* than other forms of interrupted suture; one lock-stitch covers the ground of two Halsteds and nearly four Lemberts, with perfect safety, because of the tension in two directions, and because of the lock arrangement. As demonstrated, there is *absolute insurance against escape of contents* of stomach, bladder or bowel.

At the Post-Graduate Laboratory of Anatomy and Operative Surgery, we are conducting an exhaustive series of experiments with this lock-stitch, the results of which will be given later and at length. The results, however, have thus far been most gratifying, but possible disadvantages may have been overlooked, and for this reason I wish to offer the suggested suture for the consideration of the profession.

MAY WE NOT FREQUENTLY DO GREAT HARM, RATHER THAN ANY GOOD, BY OFFICE TREATMENT OF FEMALE GENERATIVE ORGANS?*

BY MILO BUEL WARD, M.D.
Clinical Professor of Gynecology, University Medical College.
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The office treatment of female patients, for fancied or real diseases of their generative organs, is so common a practice that nearly every woman has been subjected to some form of treatment through a speculum, during her life.

In presenting this question for your consideration, the writer has no thought of condemning in a wholesale way local applications to the vaginal vault and presenting cervix, of such remedies as are harmless, in the treatment of conditions indicating the necessity for such applications. It might be well at the very beginning, however, to make the statement that, so far as my experience goes, the cases are rare among the great mass who come to our offices presenting *only* such trouble as may be seen through the speculum, and, therefore, require *only* the application of soothing drugs to the presenting parts.

Another statement that will hardly admit of successful controversy is that patients who are suffering from serious pelvic disease requiring frequent local treatments—if such are thought to be indicated—will be more harmed than benefited by coming to our offices. This leads to the statement that patients who are really suffering from disease of their generative organs, should remain at their homes, or be put in a hospital, where quiet can be enforced during the period of treatment, rather than come to our offices and undergo the physical and nervous strain incident to such an undertaking. Let us ask next: What are we to accomplish by the local treatment of diseased pelvic organs? Before enlarging on this proposition, we are willing to admit that such diseases as can be observed through the speculum may be benefited by judicious applications. How much of the uterus can be seen through the speculum? The answer is, only a small and trifling portion of this organ. What we mean by "trifling" is, that aside from malignant affections it is very rare to have diseases of the presenting cervix which cause suffering to any great extent and, perhaps, never invalidism. This, then, leaves the uterus proper and its adnexa beyond the reach of local application. We readily admit that the endometrium may be treated by local applications in our offices, but we do not think it ever should be, and because of the fact that it frequently is, the writer has been led

*Read before the Jackson County (Mo.) Medical Society, July 13, 1899.

to sound this note of warning. I insist that any treatment of the endometrium by the usual methods employed in our offices is a most dangerous procedure. Is it not a fact, however, that it is a custom for physicians to make applications to the endometrium almost as regularly as they attempt to treat women for diseases of the generative organs?

To me it is inexplicable that, with our present knowledge of the pathology commonly found in the appendages of women complaining of pelvic diseases, physicians should entirely ignore one of the most common causes of these conditions, namely, the passing of sounds and other instruments which abrade the endometrium and excite septic infection. If the endometrium is to be subjected to applications of medicine, this should be done only after thorough preparation of the patient and complete dilatation of the cervical canal, a régime which can not be carried on in safety in our offices. The carrying into the endometrium of small quantities of medicine on a cotton probang can not be expected to accomplish very much in the treatment of endometritis. This phase of the subject may be dismissed by stating that the management of endometritis, when of sufficient gravity to require treatment, should be made a surgical procedure, with every precaution that we are expected to exercise in these days of aseptic surgery.

The application of medicine to the vaginal vault for diseased appendages is quite as scientific as it would be for us to wash our faces in bichlorid solution, for the cure of postnasal catarrh.

Women suffering from diseased ovaries and tubes, who go to their physician's office for treatment two or three times a week, are surely objects of commiseration. Such patients would derive infinitely more benefit from the rest which they might obtain by spending two or three hours in bed the days they usually make these visits than they can receive from any treatment, however skilfully applied, by way of local applications to the vaginal vault.

In cases of hyperplasia of the uterus, great benefit is derived from topical applications, which may be done in our offices.

For displacements of the uterus, the local treatment at our offices often gives comfort, if no attempt is made to replace a retroverted uterus by means of instruments in the canal of this organ. Tampons of cotton or lamb's wool saturated with boroglycerid, or any proper remedy, placed high in the posterior fornix, with the patient in the knee-chest position, will afford temporary comfort and give some permanent relief by means of the depletion, the result of the medication. What should eventually be done with this class of cases is not my prerogative at this time to discuss. This, then, leads to the conclusion that in the treatment of the genital organs of the female it is essential that, first of all, a proper diagnosis be made regarding the pathology of the case under consideration. If the patient is suffering from conditions that may be benefited by local applications, with the assurance that no harm will come to the patient from either the treatment or the physical effort to reach our offices, then such treatment is laudable and should be encouraged.

There is no doubt that it has been the experience of every practitioner to have patients come to him for examination who have been under treatment for an indefinite period, and yet do not know—because they have never been told by their attending physician—the cause of their suffering. Let us, then, be thorough in our primary examinations, and if we can not satisfy ourselves the first time the patient comes, make a second, or third, or fourth appointment, until we are as certain as possible of the condition with which we have to deal, and then we can give the patient an intelligent prognosis.

Another objection to the routine office treatments is the question of the septic condition of our instruments. How many of us take the trouble to thoroughly sterilize our specula and other instruments used in the treatment of women there. Has it not frequently occurred to each of us that there is great danger of carrying infection from one patient to another unless our instruments are on each occasion thoroughly sterilized? It is safe to say that this precaution is frequently not taken, and therefore much harm is caused by even the simplest instrumental examination and treatment.

I am well aware that it is not a popular chord to strike, to criticize in the mildest terms office treatment of female patients, because this class of practice is a source of large revenue to the great mass of our practitioners. However, so many cases have come under my personal observation, of patients who have been under treatment for long periods of time, and by a number of different physicians, whose conditions when examined presented no indication for local treatment, but who were suffering from the gravest pelvic disease, that I have been led to make this mild protest against what appears to me frequently *very careless work* on the part of practitioners of medicine. I think it is our plain duty to state frankly to our patients our diagnosis of their condition; what the treatment is intended to accomplish; and the length of time likely to be required to bring about the desired results. I admit that this frankness will frequently cause patients to migrate to other physicians, but a knowledge of that fact should not swerve us from doing what we consider to be right and scrupulously honest in our professional transactions.

In conclusion, I can not refrain from calling the attention of the profession to the importance of a constant watchfulness over patients during the climacteric changes, and, in fact, from this important epoch for years afterward, if there is any history of pelvic pains, bloody discharges, and rapid loss of flesh and strength. The symptoms of malignant invasion of the uterus are so insidious that it requires the most careful observation to detect them before they have made such progress that relief can not be promised the sufferer.

We are then expected to treat conditions found, on thorough examination, in an intelligent and scientific manner, strenuously avoiding every method which does not promise benefit and may cause harm, urging our patients to report reguarly for examinations in case there are any symptoms which point to some lurking disease which may go on to serious consequences.

Therapeutics.

Treatment of Scarlet Fever.

Notwithstanding the opinion of the great majority of physicians that there is no specific for scarlet fever, there are a few physicians, notably Illingworth and Clement Duke, who believe that biniodid of mercury in doses varying from 1/2 to 1/24 grain acts as a specific, arresting fever and preventing desquamation. Shakhovsky, on the other hand, believes salicylic acid will prevent all complications, such as uremia, dropsy, diphtheria, anginas, and lymphadenitis, and remove them when present.

He employs the following formula:

℞. Acidi salicylici.....gr. xv
Aquæ destil. ferrid.....℥ii
Syrupi aurantii.....℥i

M. Sig. From one to four teaspoonfuls every hour during the daytime, and every two hours by night.

To prevent relapses, the mixture must be continued at longer intervals for several days after defervescence. He says that he has succeeded with this method in a large number of cases of malignant type. It is, however, useless when resorted to late, or, when there is present severe chronic disease.

Dr. Marcus P. Hatfield, in the "American Text-Book of Diseases of Children," says, regarding the general treatment of scarlet fever:

If the initial nausea is vexatious, it may often be allayed by:

℞ Aquæ cinnamomi
Liquoris calcis, āā ..... ℥i
Tinct. gelsemii ..... ℥ss
M. Sig. Teaspoonful every hour.

For the high arterial tension and fever, tincture of aconite, given according to the plan of Ringer—i. e., a drop every quarter hour until arterial tension is decreased, and then given sufficiently to hold the pulse at that point, every two or three hours—is satisfactory.

Chloral hydrate is a favorite with the writer, almost entirely displacing the tinct. ferri chloridi of his earlier practice, except in those cases where there is malignant angina from the beginning. In such cases nothing has been found superior to the tincture of the chlorid of iron—one drop per dose for each year of the child's age—with whisky or brandy, given according to Dr. Chapman's plan. The surprising tolerance of such children for alcoholic stimulants shows that their power is expended otherwise than in their usual effects upon the brain. Many such children will take one-half ounce of brandy every hour without showing any of the usual physiologic effects. In ordinary cases, however, small doses of chloral hydrate seem to be all that is necessary to relieve restlessness, moderate the angina, and, to a limited degree, act as an antiseptic. For the first forty-eight hours such a prescription as the following has often proved most useful:

℞ Chloralis hydratis ..... ℥ss-i
Aquæ camphor ..... ℥ss.
Syrupi aurantii cort. ..... ℥iss.
M. Sig. Dose, a teaspoonful. To alternate with aconite as required.

When the eruption is tardy in appearing, a hot salt or mustard bath will expedite matters, or, if these are ineffectual, packing in a sheet wrung out of hot water and sprinkled with mustard rarely fails.

Dr. J. Lewis Smith says:

The physician when summoned to a case, however mild, should never fail to take the temperature, note the pulse, inspect the fauces, and inquire in reference to the fecal and urinary evacuations, that he may detect early any unfavorable changes which may occur.

Since in all cases angina and more or less blood-deterioration are present, the following prescription will be found useful in mild as well as severe scarlet fever:

℞ Potassii chloratis ..... gr. xv to xx
Tinct. ferri chloridi ..... ℥ii
Glycerini ..... ℥ss
Aquæ ..... ℥iiiss.
M. Sig. Dose, one teaspoonful every hour to two hours for a child of 3 years.

Glycerin and water appears to be a better vehicle in the above prescription than simple syrup, since it is more penetrating. Small doses of this medicine, frequently administered, act beneficially on the surface of the throat, and tend to prevent the anemia which is so common after scarlet fever. If the medicine be given gradually, or if the patient gargle with it before swallowing, and no drink be given subsequently for a few minutes, a better effect is obtained upon the inflamed fauces. Potassium chlorate in large doses is known to be an irritant to the kidneys, causing intense hyperemia of these organs, with bloody urine or suppression of urine. . . . Doses of 1/2 to 1 grain can apparently be administered with safety to children, so that not more than 15 to 20 grains are given in twenty-four hours. A quantity much exceeding this involves risk. In mild cases quinin is useful as a tonic and an aid in maintaining a mild type of the disease. I have employed the following prescription:

℞ Quininæ sulphatis ..... gr. xvi
Syrupi pruni Virg.
Syrupi yerbæ santæ, āā ..... ℥i
M. Sig. Dose, one teaspoonful every three to four hours to a child of 3 to 5 years.

The iron mixture, with or without the potassium chlorate, should be administered twice between the doses of quinin.

If constipation exist, an enema or some mild aperient may be given. Moderate diarrhea may need nothing more than a restricted diet. Should it be persistent and accompanied by fever, paregoric, either alone or conjoined with subnitrate of bismuth, will usually hold it in check.

Dr. Samuel C. Busey says that "restlessness, sleeplessness, and other mild nervous disturbances will frequently yield promptly to bromid of potassium. Convulsions, especially in the early stage, may also be controlled by it. The cerebral and nervous disturbances are so generally associated with the febrile condition that their proper treatment refers to the management of the temperature, and such measures as will reduce the fever will effectually control them."

Should the temperature range above 102 F. some one of the principal antipyretics—antipyrin, acetanilid, phenacetin, etc., may be employed, carefully watching the effect. Should the temperature rise above 103, and more especially in the hyperpyretic conditions with a temperature above 104, and perhaps reaching 106 or 107 F., some one of the more efficient methods of the application of cold water must be employed, such as cold sponging of the entire body frequently repeated; Ziemssen's graduated bath, by immersing the patient in water at 90 F. and gradually reducing it to 80; the cold pack of Currie, or the application of the ice-coil to the head. The condition of the throat demands special attention. Pellets of ice, frequent draughts of carbonic acid water, gargles of potassium chlorate or lozenges of this drug allowed to slowly dissolve may be all that will be needed. In the severer forms, spraying the throat with solution of hydrogen peroxid, or some antiseptic lotion will prove the most effective method of treatment.

Regarding cervical adenitis, Dr. Marcus P. Hatfield says that it is more frequently overtreated than neglected, for the swollen and tender glands apparently require immediate attention. And yet the trouble lies farther back, for the débris that blocks these inflamed glands come usually from the pharynx. Hence efficient pharyngeal and nasal cleansing will do more for adenitis than poultices, lotions, or ointments. Instead of poultices and iodin, simple rest and warmth will often work wonders, even in brawny, swollen necks, where suppuration appears inevitable. At all events, camphorated oil, applied on absorbent cotton, should be tried before proceeding to more vigorous measures.

Speaking of scarlatinal nephritis, Dr. Hatfield recommends that free diaphoresis be induced by means of hot baths, hot infusion of jaborandi (℥i to O i, etc. The following diuretic mixtures have been highly recommended:

℞ Potassii acetatis
Potassii bicarbonatis
Potassii citratis, āā ..... ℥ii
Infusi tritici repentis ..... ℥viii
M. Sig. Teaspoonful every three or four hours to a child of 5 years.

℞ Liq. ammonii acetatis
Syrupi acidi citrici, āā ..... ℥ii
M. Sig. Teaspoonful every hour in hot lemonade.

℞ Potassii acetatis ..... ℥ss
Infusi digitalis ..... ℥vi
M. Sig. One teaspoonful every four hours.

Dropsy may require the use of some hydragogue cathartic. J. Lewis Smith recommends the following:

℞ Olei cinnamomi ..... gtt. viii
Magnesii sulphatis ..... ℥i
Potassii bitartratis ..... ℥ii
M. Sig. One teaspoonful repeated from two to four hours until catharsis occurs.

In the later stages of scarlatinal nephritis iron may be indicated, either in the form of tincture of chlorid of iron, or Basham's mixture.

The following makes a pleasant chalybeate tonic:

℞. Tinct. ferri chloridi ..... ℥iii
Acidi phosphorici dil ..... ℥vi
Glycerini ..... ℥vii
Vini xerici ..... ℥iv
M. Sig. Teaspoonful four times a day.

The following prescriptions have been employed by eminent clinicians, in the various stages of scarlet fever:

℞. Acidi borici ..... ℥ss.
Potassii chloratis ..... ℥ii
Tinct. ferri chloridi ..... ℥ii
Glycerini
Syr. simplicis, āā ..... ℥i
Aquæ ..... ℥ii
M. Sig. Teaspoonful every two hours for a child of 5 years.
—*Smith.*

Begin treatment with the administration of calomel; then give throughout the disease:

℞. Chloralis ..... gr. xxx
Syr. lactucarii
Aquæ, āā ..... ℥ss. to i
M. Sig. Teaspoonful in ice-water every two or three hours. Complete narcotism should never be attained.
—*Wilson.*

Illingworth considers the following a specific and prophylactic:

℞. Liq. hydrarg. bichloridi (1 to 5000) ..... ℥iii
Potassii iodidi ..... gr. x
Ferri et ammonii citratis ..... gr. xx
Syrupi ..... ℥ss.
Aquæ, q. s., ad ..... ℥ii
M. Sig. Teaspoonful every two hours to a child of from 2 to 4 years.

DISINFECTANT.

For the purpose of disinfecting the sick-room J. Lewis Smith highly recommends volatilization of the following mixture in boiling water:

℞. Acidi carbolici
Olei eucalypti, āā ..... ℥i
Olei terebinthinæ ..... ℥vi
M. Sig. A tablespoonful to be added from time to time to a pan of hot water, to be kept boiling on a gas stove.

FOR ANOINTING THE BODY.

℞. Acidi carbolici
Olei eucalypti, āā ..... ℥i
Olei olivæ ..... ℥vii
M. Sig. For inunction every three hours.

℞. Thymol ..... gr. x
Olei theobromæ ..... ℥i
Alcohol, q. s.
Ft. solutio. Sig. For inunction twice or three times a day.
—*Smith.*

℞. Acidi carbolici ..... gr. xx
Thymol ..... gr. x
Petrolati vel Ung. Simp ..... ℥i
M. Sig. Rub in well.
—*Starr.*

When desquamation begins, to shorten this stage:

℞. Resorcin ..... 5 parts
Salicylic acid ..... 5 parts
Superfatted soap ..... 100 parts
M. Sig. Apply locally.

℞. Hydrarg. bichloridi ..... 1 part
Aquæ ..... 1000 parts
M. Sig. As a wash for the surface, especially during desquamation.

℞. Ichthyol ..... 5 parts
Unguenti ..... 100 parts
M. Sig. Apply to produce decline of fever, and for beneficial effect on skin.
—*Seibert.*

Internal Hemostatics.

F. Pick, of the University of Prague, publishes in the *Archiv. f. Exper. Path. u. Pharm.*, the results of an extended series of experiments on animals as follows:

1. Curare does not affect the vasomotor filaments appreciably in small doses, but causes a drop in constrictor tone when given in larger amounts.

2. Chloroform, after an evanescent rise in blood-pressure, produces a deep depression accompanied by a diminished outflow from the peripheral veins and a corresponding increase in that from the jugulars and mesenterics. Narcosis by this agent, therefore, involves abdominal and cerebral vasodilation, this being the result of action on the vasomotor center. The reduction in the force of the heart may also in some measure explain the diminished outflow.

3. Ether in narcotic amounts does not markedly depress blood-pressure, but otherwise the effect on the venous bleeding is the same.

4. Atropin, in the earlier stages of its action, checks the outflow from the jugulars and the femorals, though its effect on the latter is the greater. Strong faradic stimulation of the peripheral stump of the vagus is ineffectual in producing contraction of the vessels after the administration of large amounts, but dilatation follows cessation of the stimulus. Therefore it is concluded that in these amounts the drug induces paralysis of the peripheral vasoconstrictor fibers.

5. Digitalin, helleborin, and strophanthin all reduce the outflow from the femorals, acting on the mesenterics and jugulars to a less extent. The digitalis group may therefore be regarded as vasoconstrictors in addition to their cardiac effect.

6. Ergotin in non-pregnant animals caused no rise in blood-pressure, and seemed to have no value as a vasoconstricting agent.

7. Hydrastinin decreases the escaping blood-volume to a very marked degree, influencing especially the vessels at the periphery, but also notably affecting the jugulars and mesenteric areas.

8. Beta-tetra-hydro-naphtylamin produces a peripheral rise in pressure, but at the same time cuts down the outflow. The bleeding is not affected by stimulation of the peripheral stump of the cut sciatic, but an increase follows the cessation of the stimulation.

9. Barium chlorid, while checking the outflow from the peripheral and mesenteric veins, increases it from the jugulars and causes an enormous rise in blood-pressure.

10. Nicotin and piperidin raise blood-pressure, but check hemorrhage through vasoconstriction of peripheral origin.

11. Amyl nitrite produces a general vasodilatation, which is the result of local action on the vessels, and is independent of central control.

12. Carbonic acid produces a localized dilatation of the cerebral vessels, accompanied by a decrease in the bleeding from the mesenterics and femorals, but an increase in the outflow from the jugulars.

13. Peptone lowers blood-pressure and dilates the vessels of the abdomen, but not those of the periphery.

14. Adrenal extract raises the general pressure, but causes an accompanying vasoconstriction and well-marked decrease in the amount of outflow.

As a remedy for practical application in cases of internal hemorrhage, ergotin would seem of doubtful value, but the use of both hydrastinin and atropin appears to be justified by the experimental evidence.

Guaiacol As a Diagnostic Agent.

Guaiacol is recommended by Moncorvo, according to *Merck's Archives*, as affording a valuable aid to the differential diagnosis between intermittent fever and tuberculosis. The diagnosis of acute and subacute tubercular fever in children is never easy, but the difficulties are greatly increased in the tropics, where malarial infection must also be thought of. Thus, in Rio de Janeiro, the author found malaria associated with tuberculosis in 113 out of 219 cases of the latter. Where doubt exists as to the true character of the trouble, local applications of guaiacol to the skin are advised. In malarial cases no effect is produced, but if the fever is of tubercular origin a very prompt drop in the temperature follows. This differential reaction has been found of greater service in diagnosis, and also gives valuable indications where the two affections occur simultaneously.

Sublimate and Quinin Phenate in Puerperal Infection.

The Italians are developing this endovenous method of treatment, and Zamboni reports in the *Gazz. delgi Osp.*, November, two cases of puerperal infection apparently doomed, both promptly relieved and cured with alternate endovenous injections of sublimate and quinin phenate.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

New York Medical Journal, January 13.

1.—*President's Address before Society of Alumni of Bellevue Hospital. Charles E. Quimby.
2.—*Taking Cold. Green V. Woolen.
3.—*Therapeutic Application of Carbonic Acid Gas. A. Rose.
4.—*Anesthetic Properties of Nirvanin. A Contribution to the Study of the Infiltration Method of Local Anesthesia. Charles A. Elsberg.
5.— Second Report on Therapeutics of Heroin. Morris Manges.
6.—*Echinacæ Angustifolia; A New and Successful Aphrodisiac for Impotence, Pseudoimpotence, etc. J. Coplin Stinson.
7.—*The Lung Reflex. Albert Abrams.

Philadelphia Medical Journal, January 13.

8.—*Excretion in Acute Infectious Diseases. H. A. McCallum.
9.—*Cerebral Rheumatism. Francis P. Morgan.
10.—*Diplococci—A Cause of Erysipelas. G. E. Pfahler.
11.—*Certain Essential Points in Technic of Staining Nerve-Cells. Stuart Paton.
12.—*Varicose Veins of Vulva. William Edgar Darnall.
13.—*Anatomic Relations in Pelvic Hematoma Following Labor. W. Reynolds Wilson.

Boston Medical and Surgical Journal, January 11.

14.—*Case of Perforating Gastric Ulcer; Operation; Recovery; With Remarks on Surgery of Gastric Ulcer. F. B. Lund.
15.—*Case Method of Teaching Systematic Medicine. W. B. Cannon.
16.— Case of Relapsing Fever. George O. Ward.
17.— Treatment of Pain in Tabes Dorsalis; Report of Case. Alfred H. Lindstrom.
18.— Pistol Wound of the Abdomen. C. A. Atwood.

Medical Record (N. Y.), January 13.

19.—*Relative Intensity of Second Sounds at Base of the Heart; a Study of One Thousand Cases. Sarah Robinson Creighton.
20.—*Acquired Non-Malignant Stricture of Rectum; Causes, Symptoms, and Treatment. W. Duff Bullard.
21.—*Post-Partum Hemorrhage, Its Prevention and Treatment, with Report of an Unusual Case. Edward P. Davis.
22.—*Question of Legal Control of Prostitution in America. S. Lustgarten.

Medical News (N. Y.), January 13.

23.— Gonorrhea; Its Dangers to Society. Albert Neisser.
24.—*Experimental Tests at Vera Cruz, Mexico, of the Doty-Fitzpatrick Serum for the Prevention and Cure of Yellow Fever. A. Matienzo.
25.—*Report of Case of Scorbutus in an Infant. Walter Lester Carr.
26.— Myomectomy per Vaginam Combined with Shortening the Round Ligaments for Retroversion, etc. J. Riddle Goffe.

Cincinnati Lancet-Clinic, January 13.

27.—*Ophthalmic Memoranda. David DeBeck.
28.— Cesarean Section. John A. Graft.

Medical Review (St. Louis, Mo.), January 13.

29.— On Some Rare Causes of Insomnia. H. Oppenheimer.

Columbus Medical Journal, Dec. 20, 1899.

30.— Diagnosis and Treatment of Diphtheria. T. W. Rankin.
31.— Elimination, Relation to Production of Disease. W. S. Philips.
32.— Diagnosis of Smallpox. C. O. Probst.
33.— Clinical Lecture; Case of Chronic Interstitial Nephritis. Wm. Osler.

Virginia Medical Semi-Monthly (Richmond), Dec. 22, 1899.

34.—*Hematocele—Studied with Reference to Pathogenesis and Treatments. Geo. Tucker Harrison.
35.—*Advertising in the Medical Profession. Charles T. McClintock.
36.— Different Phases of Electric Treatment. J. McFadden Gaston.
37.— Report of Case of Hemoglobinuria, with Remarks. John R. Hicks.
38.—*Beef-Gall Enemata in Treatment of Post-Operative Obstinate Constipation and Intestinal Obstruction. F. C. Ameiss.
39.—*Splenectomy with Report of Two Cases. J. Wesley Bovée.
40.— Experience in Operations for Typhoid Perforation. Hugh M. Taylor.
41.— Eye and Ear Work in the London Hospitals. E. Oliver Belt.
42.— Coffee Grain in Bronchus for Two Months: Tracheotomy: Successful. E. W. Row.

Pediatrics (N. Y.), January 1.

43.—*Hydriatic Measures in Management of Febrile Disorders of Infancy and Childhood. Simon Baruch.
44.— Case of Interstitial Emphysema. Max Girsdansky.
45.—*Complications of Diphtheria. I. A. Abt.
46.— Double Paralytic Varus from Peripheral Neuritis. Henry Ling Taylor.

Journal of Experimental Medicine, September-November, 1899.

47.—*Experimental Investigation of the Treatment of Wounds of the Heart by Means of Suture of the Heart Muscle. Charles A. Elsberg.
48.—*Case of Acute Endocarditis Caused by Micrococcus Zymogenes (Nov. Spec.), with a Description of the Micro-organism. William G. MacCallum and Thomas W. Hastings.
49.—*Study of the Neurone Theory. Martin H. Fischer.
50.—*Contribution to Subjects of Chronic Interstitial Nephritis and Arteritis in the Young, and Family Nephritis; with a Note on Calcification in the Liver. N. E. Brill and E. Libman.
51.—*Lymphoma, a Benign Tumor Representing a Lymph Gland in Structure. E. R. LeCount.
52.—*Observations Concerning Leukemic Lesions of the Skin. Horst Oertel.
53.—*Case of Addison's Disease with Simple Atrophy of Adrenals. Carlin Philips.
54.— Peculiar Form of Fibrosarcoma of Brain. Alice Hamilton.
55.— Differentiation and Classification of Water Bacteria. George W. Fuller and George A. Johnson.
56.—*Bacillus Pyocyaneus and Its Pigments. Edwin O. Jordan.
57.— Preliminary Note on Fractional Precipitation of Globulin and Albumin of Normal Horse's Serum and Diphtheric Antitoxic Serum and Antitoxic Strength of Precipitates. James P. Atkinson.

Annals of Surgery (Philadelphia), December, 1899.

58.—*Differentiation of Urines. F. Tilden Brown.
59.—*Mechanism of Fracture of Neck of Radius. Eugene R. Corson.
60.—*Properitoneal and Interstitial Inguinal Hernia. Van Buren Knott.
61.—*Proper Wire for Introduction into Aneurysmal Sac. James C. Reeve, Jr.
62.—*Nitrous Oxid and Ether Anesthesia by the Open Method. Albert H. Miller.
63.—*Note on the Operative Relief of Ectopic Vesica. David Edward Mundell.
64.—*Persistent Thyroglossal Duct. George E. Armstrong.
65.—*Actinomycosis in Man, with Special Reference to Cases which have been Observed in America. John Ruhrah.

Journal of Boston Society of Medical Sciences, December, 1899.

66.— Malformations of the Kidneys. W. F. Whitney.
67.— Remarkable Skulls. Thomas Dwight.
68.— Experiments on Saprolegnia Ferax (?), and Their Application to the Trout Hatchery. J. H. Cunningham, Jr.

Archives of Pediatrics (N. Y.), January.

69.—*Clinical Study of Laboratory Milk in Substitute Feeding. Louis Starr.
70.—*Cerebrospinal Symptoms in Influenza in Infancy. T. S. Westcott.
71.— Case of Fracture of Pelvis with Rupture of Urethra. J. B. Bissell.
72.— Clinical Lecture on Scarlet Fever, Bednar's Aphthæ, Geographic Tongue, Meningocele and Dermoid. A. Jacobi.

Illinois Medical Journal (Springfield), January.

73.— Some Remarks on Chronic Bright's Disease. Arthur R. Elliott.
74.—*Movable Kidney. A. E. Halstead.
75.— Psychology vs. Medicine. J. T. McAnally.
76.—*Report of Cases in Gall-Bladder Surgery and Their Sequelæ. J. E. Aliaben.
77.— Desirable Sanitary Measures for Smaller Cities. Louis E. Fischer.
78.— Medical Organization. James Tweddale.

Post-Graduate (N. Y.), December, 1899.

79.— Concerning Convergent Strabismus. D. B. St. John Roosa.
80.—*Clinical Lecture on Hysteric Blindness. William Oliver Moore.
81.— Latent Squint. Francis Valk.
82.— Cases of Unusual Interest in the Eye Clinic. Edward S. Peck.
83.—*Purulent Ophthalmia in Private Practice. Frank Van Fleet.
84.— Report of Case of Small-Round-Cell Sarcoma of Orbit and Neighboring Sinuses in a Child; Metastasis, Exhaustion, Death. A. Edward Davis.
85.—*Myopia and Myopic Astigmatism, Notes on Treatment. Edgar S. Thomson.
86.— Brief Résumé of Some Eye Injuries. James R. Nelson.
87.— Ocular Reflex Neurosis (Abdominal Types). S. W. S. Toms.

The American X-Ray Journal (St. Louis, Mo.), January.

88.— Excitation of Crookes' Tube by Static Machine. John T. Pitkin.
89.— Fluorescent Lead: Some Observations in Radiography. Alex L. Hodgdon.
90.— Roentgen Rays in Military Surgery. John Hall-Edwards.
91.— Roentgen Rays in Spina Bifida. Carl Beck.

St. Paul Medical Journal, December, 1899.

92.— Tumors of Breast. Charles L. Scudder.
93.—*Major Operations with Ethyl Chlorid and Primary Chloroform-Inhalation-Anesthesia. Oscar Bloch.
94.— On a Certain Lack of Mechanical Facility in Surgeons. J. G. Mumford.

Journal of Mississippi State Medical Association (Biloxi), January.

95.— Sanitation and Isolation as a Means of Prevention and Eradication of Yellow Fever. J. A. Tabor.
96.— Gonorrheal Infection of Puerperal Woman; Report of Case. M. J. Lowery.
97.— Placenta Previa. W. W. Robertson.

Memphis Lancet (Tenn), January.

98.—*Report of Four Months' Service in Internal Medicine at St. Joseph's Hospital, Memphis. Wm. Krauss.
99.—*Modern Treatment of Face Presentations. Gustav Kolischer.
100.—Physician as a Factor in Spread of Contagious Diseases. F. S. Raymond.
101.—*Some Remarks on Diseases of Eye, Ear, Nose and Throat in the Negro. E. C. Ellett.
102.—Recurrence of Typhoid Fever, with Report of Case. L. L. Meyer.

St. Louis Clinique, January.

103.— Case of Error of Refraction Complicated with Marked Esophoria Producing Persistent Asthenopia. A. C. Corr.
104.— Diet in Lithemia. A. B. Conklin.
105.— Ear, Nose and Throat. Oscar F. Baerens.

Providence Medical Journal (R. I), January.

106.—*Nerve Grafting. Frank E. Peckham.
107.— Some Observations on Bright's Disease. Herbert Terry.
108.— Sanatoria for Consumptives. Jay Perkins.
109.— Report of Two Brain Cases, with Operation. J. W. Courtney.
110.— Some Points on Technic of Cerebral Operations. Charles Greene Cumston.

111.— Case of Probable Acute Yellow Atrophy of Liver. F. B. Fuller.

Journal of Tuberculosis (Asheville, N. C.), January.

112.— Some Measures Lessening Infection and Spread of Tuberculosis. S. Case Jones.

113.—*Early Sign of Tuberculosis. Thos. F. Harrington.

114.—*Diagnosis of Initial Stages of Pulmonary Tuberculosis. Wm. R. Cochrane.

115.— Treatment of Pulmonary Tuberculosis with Special Reference to Specific Medication. J. Norment Baker.

116.— Treatment of Pulmonary Tuberculosis. Wm. R. Cochrane.

117.— Pathology and Symptomatology of Pulmonary Tuberculosis. Karl von Ruck.

Memphis Medical Monthly (Tenn.), January.

118.—*Ileocolitis in Children. A. B. DeLoach.

119.—*Abscess of Lung Following Pneumonia, with Case Reports. J. H. Reilly.

120.— When to Operate in Appendicitis. E. E. Haynes.

121.—*New Auto-Extension Fenestrum Splint. R. W. Barton.

122.—*Pediculi Capitis as a Cause of Enlarged Cervical Glands. Battle Malone.

123.— Rational Care of Babies. Adele E. Shaw.

124.— A Brief Résumé of Surgical Cases Operated on at City Hospital During Three Months' Service. F. D. Smythe.

Southern Practitioner (Nashville, Tenn.), January.

125.—*Diphtheria and Its Treatment. E. G. Wood.

Indiana Medical Journal (Indianapolis, Ind.), January.

126.—*Care of the Recent Case of Insanity. C. B. Burr.

127.— Report of Case of Hemophilia. George J. Weitz.

AMERICAN.

1. **Medical Errors.**—Quimby calls attention to certain errors of reasoning in medical publications: the ignoring of ignorance; too much reverence for authority; the failure to stick to the proposition in hand; the careless use of indefinite terms, etc. He uses a certain article to illustrate his points, and shows its defective reasoning. The practical suggestions he offers are: 1. The author of any paper should furnish the secretary, at least a week before his paper is read, an abstract stating the specific propositions which he proposes to establish, and the heading of the arguments on which they are supported. 2. Copies of this should be furnished the gentlemen who undertake to discuss the paper, and they should also present their direct discussion in manuscript. He thinks that here we make a great mistake, as in discussion men are apt to evade important points and more surely will not confess errors. 3. Following the written discussion the author of the paper should be put on the stand and each of the discussers be allowed a certain time for cross-questioning, the author being strictly limited to answering questions, but at the close of the discussion he should have the same opportunity to question his critics. 4. The result of such discussion may be definitely formulated; there should be appointed a judge, with authority to hold the disputants to their argument, and a jury of three or more to, at the close, decide whether the author has or has not maintained his position.

2. **Taking Cold.**—The explanation of the process of taking cold, offered by Woollen, is that it begins in a systemic depression of temperature. One who can preserve the normal standard of temperature is safe and does not take cold. He also calls attention to the relation of nasal stenosis and faulty systemic temperature, and says that mouth-breathers very generally have subnormal temperature.

3. **Therapeutics of Carbonic Acid Gas.**—The conclusion of Rose's paper treats of the uses of carbonic acid gas inflations of the rectum, and points out that administered this way it has been of benefit in the treatment of chlorosis, phthisis and asthma, as well as dysentery, though his experience does not include the specific tropical form. He also finds it valuable in vomiting in pregnancy, atony and impotence of the genital organs, etc. The difficulties in the way of the general use of gases have been in the cumbersome and imperfect apparatus, and he suggests the use of the compressed gases in suitable sized receivers for convenient use.

4. **Nirvanin as an Anesthetic.**—After noticing the methods of local anesthesia, Elsberg reports experiments with a new substance discovered by Einhorn and Heinz, and named by them nirvanin. He finds it ten times less poisonous than cocain, on rabbits, and quotes Luxenburger's findings as to its antiseptic value. His conclusions are: 1. Nirvanin has distinct and valuable anesthetic properties when injected into the tissues according to the infiltration method. 2. It is ten times less poisonous than cocain and more than three times less so than eucain. 3. It has distinct antiseptic properties; a solution of 1 per cent. or more can be kept as a stock solution and will remain sterile. 4. It is a stable compound and can be boiled a number of times without diminishing its anesthetic properties, to any degree.

6. **Echinacea Angustifolia in Impotence.**—This new remedy is recommended for impotence, by Stinson, who thinks that locally used it will be of much value as an aphrodisiac.

7. **Lung Reflex.**—Abrams calls attention to the lung reflex as of diagnostic value in the bronchopneumonia of children. It consists, as we are aware, of dilatation due to local external irritation, and in cases where lung atelectasis exists it serves to relieve the condition. Cases are cited as showing its value both in diagnosis and treatment.

8. **Excretion in Treatment of Acute Infectious Diseases.**—McCallum believes that purging has special advantages in acute infectious diseases, though the question as to the exact time to use it is the most important one. Purging is a form of serumtherapy, and its vigorous early use is of paramount importance. He speaks more especially of the treatment of pneumonia and typhoid fever by this means, and he thinks that thorough purging in the first forty-eight hours is often of the greatest importance. After forty-eight hours he would not allow it, but if it is done thus early, even the feeble and alcoholic subjects are less liable to extensive invasion of the pneumococcus and the resulting complications. His experience with the treatment of typhoid fever by purging is less extensive, but he agrees with Thistle that free purging can shorten the course of the disease, though he is not of the belief that this is brought about by emptying the intestinal canal of toxins and germs. He has used the purgative and cold bath treatment together, with apparently happy results, but whatever treatment used, he makes one rule, that is to give strychnin in good doses early. It is a tissue arouser, especially in the nervous system, and helps to prevent the vital nerve becoming oversaturated with toxins.

9. **Cerebral Rheumatism.**—The author's theory of cerebral rheumatism is that the cerebral involvement is not due to high temperature, but that it is the effect of a toxic agent directly on the brain and its membranes. The pathology of cerebral rheumatism is not clear. When changes are found, they consist in congestion, and sometimes minute hemorrhagic effusions. The symptoms are well known and the diagnosis is generally made without difficulty, but Morgan calls special attention to the possibility of confounding the effects of the salicylates with this condition. The prognosis is grave. The treatment is symptomatic.

10. **Diplococcus of Erysipelas.**—The author presents the results of investigations in the Philadelphia Hospital. In eight patients he found a special form of diplococci occurring. They were spherical cocci, about the size of the pneumococcus, usually occurring in pairs, often singly, and very rarely in chains of four, which he thinks an accidental arrangement. As observed in pus in the blood of the inflamed part, and in the blood of rabbits, they have been seen only in pairs and were encapsulated. They stain well with aniline gentian violet and carbol-fuchsin, but not readily with Loeffler's alkaline solution of methylene blue, and still less with saturated aqueous solution or with Gabbet's solution. They grow in the presence of oxygen and at the room temperature, but better at 37 C., and are nonmotile. Cultures on bouillon show a slight cloudiness at the end of twenty-four hours, which increases from day to day, there being no tendency to clear subsequently. Glycerin-agar, at the end of twenty-four hours, shows minute opaque colonies, pinpoint in size, whitish in color, and sharply defined in outline. After five to six days these colonies become about 1 mm. in diameter, and slightly raised from the surface. Blood-serum shows a more luxuriant growth, the colonies being three to four times the size of those on glycerin-agar, and proportionately raised above the surface. They are of milk-white color, distinctly outlined, and under a low magnifying power appear smooth. Stroke-cultures show a beaded growth all along the line of inoculation. Gelatin is not liquefied and there is no evidence of the production of gas. In stick-cultures, growth occurs all along the line of inoculation but apparently ceases after from twenty-four to forty-eight hours. There seem to be no radiations and no tendency for the surface-growth to spread. A slight cupping is seen at the top of the puncture

after forty-eight hours. Litmus-milk shows no change in reaction after being in the incubator for fifteen days. They do not grow on potato. Inoculations made from cultures kept in the incubating oven eleven days showed no growth. After about eight days new cultures are produced with difficulty. Inoculations were made on five rabbits each being from a twenty-four-hour pure culture of a different case. In conclusion, he says: "I believe this diplococcus is a cause of erysipelas or of a disease which in the light of our present knowledge can not be diagnosed from erysipelas. Koch's postulates have been demonstrated with reference to this organism as follows: 1. I have found this diplococcus in the diseased tissues of eight different cases of erysipelas. 2. I have grown this organism in pure culture upon artificial mediums in each case. 3. The disease was produced in four rabbits by subcutaneous inoculations. 4. The same organism was obtained from the diseased tissues of the inoculated animals."

11. **Nerve-Cell Staining.**—Paton describes the Nissl methylene blue method and the Bethe or Apathy method of staining the fibrils in ganglion cells. He calls attention especially to certain points of the technique requisite to avoid the production of artefacts in these various methods.

12. **Varicose Veins of Vulva.**—Darnall illustrates certain cases of this condition, and shows that it is not as important a complication in labor as might appear.

13. **Pelvic Hematoma Following Labor.**—Wilson describes the anatomic conditions favoring hematomas and the causes predisposing.

14. **Gastric Ulcers.**—Lund reports a case of gastric ulcer operated on sixteen hours after the perforation, with good results. The ulcer was situated on the anterior surface of the stomach, which was favorable, and he suggests that we must operate early in these cases. He was surprised by the favorable showing in the recent statistics of this operation, and he reviews the literature and tabulates the cases.

15. **Case Method of Teaching Medicine.**—This paper recommends the study and discussion of cases as a practical method of teaching medicine. It differs from the clinic in that the cases are the printed histories and results of examinations of a patient, only so much being stated as will stimulate the student to care and discrimination. The treatment is withheld, the student being called on to supply this according to his diagnosis. The method is simply another application of the inductive method of teaching. The paper is favorably noted editorially in the same issue of the *Journal*.

16. **Intensity of Second Sounds at Base of Heart.**—After briefly noticing the opinions and statements of authors, Creighton gives the results of examinations in 1000 cases, with special reference to accentuation of the second sound, and sums up her conclusions as follows: 1. Accentuation of the pulmonic second sound is almost invariable in young children and frequent in youth. 2. After the fortieth year of life, the reverse is the case, and it is then rare to find a pulmonic second sound as loud as the corresponding aortic one. 3. Between the ages of 20 and 30 years, there is no marked accentuation of either sound. 4. In view of the above facts, it is obvious that when one speaks of an accentuated pulmonic second sound as corroborative of a diagnosis of heart disease, such accentuation must mean an increase in the loudness of the sound over that normally to be expected at the age of the patient in question. 5. Further, when we speak of an aortic second sound as accented, we must mean—in case of patients over 40 years old—more accented than it normally is. Once more, the simple comparison with the pulmonic second sound will not settle the question. The comparison must be with an ideal standard carried in the mind. 6. In interpreting the meaning of an accentuation of the pulmonic second in suspected mitral stenosis, one must bear in mind the age of the patient. The presence of a physiologic accentuation of the sound can be determined only in relation to the degree of accentuation which is to be expected at the age of the patient in question.

20. **Stricture of Rectum.**—The theories of stricture of the rectum are discussed by Bullard, and the general opinion that they are of syphilitic origin is contradicted by him. He believes that the majority are of non-syphilitic origin though syphilis may be a predisposing cause. The chief immediate factor is trauma. The proper, intelligent local treatment of non-syphilitic rectal ulceration will minimize the occurrence of rectal stricture.

21. **Post-Partum Hemorrhage.**—The general subject of post-partum hemorrhage is gone over and directions given in detail as to the management of the second and last stages of labor. The author thinks that in anemic and neurotic women the nervous system plays an important part in causing the hemorrhage.

22. **Prostitution.**—Lustgarten gives a history of the St. Louis regulatory law, and explains the reasons for its failure. He thinks that the United States will look to therapeutics for the prevention of this evil, and will watch the experiments abroad before adopting measures foreign to its people and its laws.

24. **Serum Treatment of Yellow Fever.**—Matienzo reports experimental results obtained from the bacillus icteroides by Fitzpatrick, and results of injections made with the curative serum and the preventive toxin at Vera Cruz. His conclusions are as follows: 1. Both intravenous and subcutaneous injections of the serum produce a general reaction, revealed by the hyperthermia and acceleration of the pulse. 2. The injections, both subcutaneous and intravenous, neither controlled the disease nor manifested in the patient the least reaction upon the appearance, development or duration of the symptoms of yellow fever. 3. It is not possible to form conclusions on the inoculation of the preventive toxin on account of the small number of cases and the short time employed. 4. The reaction caused by the injections of the toxin in the convalescents of yellow fever demonstrates Sanarelli's assertion that the curative powers of the serum, in animals, is not due to the antitoxin substances; and confirms by its analogy to the typhoid serum the opinion, given by some bacteriologists, that the icteroides is an Eberthiform bacillus.

25.—See abstract in THE JOURNAL of Nov. 18, 1899, p. 1292.

27. **Ocular Troubles Among Negroes.**—After having noticed the iritic troubles largely due to syphilis and tuberculosis, DeBeck remarks on the infrequency of color-blindness among negroes, and thinks this, with the general good color sense of the lower races, is an argument against any decided development of the sense of color sense in civilization. He finds negroes very generally hypermetropic, myopia being very rare, and asthenopia being also infrequent. Squint is also a rarity, but paralytic troubles appear to occur in larger proportion among them than among the whites, which he attributes to the frequency of syphilis and their habits of neglect.

34. **Hematocele.**—Harrison disagrees with Fritsch's view that hematocele is solely due to ectopic gestation. He thinks it may occur from other causes. He describes the operations, preferably laparotomy, for these cases.

35. This paper, already printed elsewhere, was abstracted in THE JOURNAL of Sept. 9, 1899, ¶ 60, p. 660.

38. **Ox-Gall Enemata in Constipation.**—Ameiss recommends the use of ox-gall enemata, obtained fresh, by injection in cases of intestinal obstruction and post-operative constipation. In three cases he found it decidedly advantageous, and in the fourth one it was ineffective, but the autopsy gave purulent peritonitis as existing. There are many cases that occur where an operation is necessary, but the use of ox-gall enemata may generally be given a trial before resorting to the knife. He believes that its action is possibly due not only to its mechanically insinuating itself in the narrow spaces of the intestinal tracts, but also to absorption of the bile salts, which are said by some to be the main exciters of prompt and distinct cholagogue action.

39. This paper, previously printed elsewhere, was abstracted in THE JOURNAL of January 13, ¶ 1, p. 97.

43.—See abstract in THE JOURNAL of Nov. 18, 1899, p. 1292.

45.—Ibid., Oct. 28, 1899, p. 1100.

47.—This paper is commented on editorially in this week's JOURNAL.

48. **Micrococcus Zymogenes (Nov. Spec.) in Endocarditis.**—McCallum and Hastings describe a micrococcus found by them in a case of endocarditis in pure culture, which was pathogenic to mice and rabbits and produced typical endocarditis in a rabbit and dog, being found in cultures from the vegetations after death. It is very small, occurs mainly in pairs, sometimes in short chains, stains by Gram's method,

grows in small, pale, grayish-white colonies on gelatin and agar, at first clouds bouillon, which then becomes clear with a whitish sediment, does not produce gas in glucose media, liquefies gelatin slowly and to some extent also blood-serum, and is especially characterized by its behavior in milk, which it acidifies, coagulates and subsequently liquefies. It produces a milk-curdling and also a proteolytic ferment, each of which is separable from the bacterial cells. It remains viable for months in old cultures, and is tolerably resistant to the action of heat and antiseptics. It has some resemblance to the pneumococcus and streptococcus, but is distinguished from them by the culture features which have been described.

49. **Study of Neurone Theory.**—From researches with a modification of Nissl's method, besides that of Golgi, Fischer concludes: 1. The neurone theory, in so far as it claims the absolute independence of the neurones, is an untenable one, as anastomoses between them have been found. 2. The dendrites, which are generally believed to have but nervous function, may also have nutritive function, if such an inference is permissible from the existing anatomic relations, which show some of the dendrites embedding themselves in the walls of the capillaries.

50. **Interstitial Nephritis in the Young.**—Brill and Libman report a case of chronic interstitial nephritis in a girl aged 14 years, with marked extensive arterial changes and the occurrence of calcific deposits in the liver. There was also nephritis in other members of the family, and the case was complicated by the hemorrhagic diathesis. They call attention to the latency of some of these cases in children, and the necessity of care and continued observation of the heart and vessels in such cases.

51. **Lymphoma.**—LeCount describes a tumor examined by him, which represented a benign, non-inflammatory, new-growth of lymph nodes, a confirmation of the definition of lymphoma by Senn.

52. **Leucemic Lesions of Skin.**—This paper is a careful study of a case in which the nodules of the skin were examined. Oertel believes it supports the view of those who regard secondary leucemic nodules as essentially derived from cells derived from the blood.

53. **Addison's Disease.**—Philips reports a case and reviews others collected in the literature of Bright's disease, with simple atrophy of the adrenals. The pathogenesis of the condition is not explained. The histologic changes present in his cases were slight, and he thinks we have to deal with a perversion, rather than a total lack of function of the organs.

54. **Water Bacteria.**—Fuller and Johnson's paper is an attempted classification of the water bacteria, of which some forty-two species are tabulated at the end.

56. **Bacillus Pyocyaneus.**—The conclusions of Jordan's paper are: 1. The fluorescent pigment formed by some varieties of bacillus pyocyaneus is produced under conditions identical with those governing the production of the pigment by other "fluorescent bacteria." 2. The production of pyocyanin is not dependent on the presence of either phosphate or sulphate in the culture-medium. It is formed in non-proteid as well as in proteid media, but is not a necessary accompaniment of the metabolic activities of the organism, e. g., tartrate solution. 3. The power of producing pyocyanin under conditions of artificial cultivation is lost sooner than the fluorescigenic power. 4. There are greater natural and acquired differences in pyocyanigenic power than in fluorescigenic. 5. The fluorescent pigment may be oxidized slowly by the action of the light and air, as well as by reagents, into a yellow pigment, and pyocyanin may be similarly oxidized into a black pigment. 6. A convenient separation of bacillus pyocyaneus into four varieties would be the following: *a*, pyocyanigenic and fluorescigenic—most common; *b*, pyocyanigenic only—rare; *c*, fluorescigenic only—not uncommon, closely related to "B. fluorescigenic liquefaciens;" *d*, non-chromogenic. 7. Except for the occasional loss of one or another function, the different varieties are not so plastic as sometimes assumed, and can not be readily converted into one another by subjection to varying conditions of life. 8. The signification and correlation of the almost countless physiologic variations among the members of this group in respect to growth in gelatin, behavior to temperature, indol production, etc., remain to be determined. It is not yet clear that the variations in chromogenic power can be in any way correlated with the presence or absence of other physiologic functions.

58. **Differentation of Urines.** The subject of ureteral catheterization is historically discussed by Brown, and reports of his own cases given. The instrument employed by him was mainly Brenner's ureter cystoscope, which has certain advantages in its small size, the high level of the ocular end of the instrument and the easy curve. He has devised an instrument, however, which he thinks is an improvement.

59. **Fracture of Neck of Radius.**—A case of this rare accident is reported with skiagraphs, by Corson, and its mechanism discussed. It can only happen apparently by special strain in backward dislocation of the arm in extension.

60. **Properitoneal Hernia.**—After discussing the subject, Knott reports a case which was operated on by him. He thinks that every case of this type, whether strangulated or not, should be immediately subjected to an operation, thereby minimizing the unusual danger of the condition.

61. **Proper Wire for Aneurysm.**—Reeve gives a report of a case which induced him to make experiments which are also reported. He thinks a silver or gold wire about .0085 of an inch in diameter, and of sufficient temper to retain its coil, would be all that is required to fill the aneurysm with clots when carrying the positive galvanic current, and it is not so thin as to be in danger of breaking. The expense of a gold wire would seem unnecessary, as the loss of silver could hardly be sufficient to be injurious.

62. **Nitrous Oxid and Ether Anesthesia.**—Miller strongly recommends the use of nitrous oxid as a preliminary to ether anesthesia, using for the latter an open cone. The average time required in his practice is about 3.05 minutes. The shortest time has been fifty seconds. He thinks it the nearest approach to an ideal anesthesia that has been produced.

63. **Ectopia Vesica.**—The method suggested for the relief of ectopia vesica is the transplantation of the bladder wall of an animal to the lower lateral abdominal fascia of the patient. After seven or eight days the union of the two tissues is sufficiently strong to allow a plastic operation, whereby the skin flap with the bladder attached may be swung over on the extruded bladder and the edges of its attached piece sutured to the defective bladder. He does not report any case where this was tried except experimentally on a dog.

64. **Persistent Thyroglossal Duct.**—This article is the report of a case which occurred under Armstrong's observation, which was operated on twice with apparently good results.

65. **Actinomycosis.**—Ruhräh concludes his paper on actinomycosis in man, noticing the prognosis, diagnosis, treatment, etc., and gives a list of the papers used in this article.

69. **Laboratory Milk in Infant Feeding.**—Starr reports an unsatisfactory experiencee with laboratory milk as compared with home modified milk food. He thinks that the separation and sterilization are overdone. He would not condemn it absolutely, as it has a use in feeding infants who must be artificially nourished from birth, in whom it can be employed up to the second month, but its applicability is limited.

70. **Cerebrospinal Symptoms in Influenza.**—Westcott reports two cases, apparently corresponding to the condition described by French observers as pseudo-meningitis-grippalis, but either ending in recovery or showing only hyperemia without inflammatory changes or bacteria after death, and with pneumonic infiltration of the lower lobes of the lungs. In both of his patients recovery took place.

74.—See abstract in THE JOURNAL of June 3, 1899, p. 1256.

76.—Ibid.

80. **Hysteric Blindness.**—The cases reported by Moore are discussed with the diagnosis, treatment, and nature of the condition. He thinks that in all of his cases the assurance of the discovery of a cause was an important factor in the cure. In every one an operation or shock was sufficient to relieve. The patient should be removed as far as possible from immediate relatives and environment, and the treatment, aside from this, is the use of such remedies and measures as are capable of startling and surprising the nerve-centers.

83. **Purulent Ophthalmia.**—It is fortunately not common for physicians in general practice to meet with purulent ophthalmias, yet they do occur and how to meet them is an import-

ant point. Van Fleet briefly reports nine cases in which he was called in consultation. He advises, as a matter of prophylaxis, the use of vaginal douches when there is any suspicion or knowledge of gonorrheal infection before child-birth. From birth he would use Credé's method of a 2 per cent. solution of nitrate of silver, and he gives instructions as to its administration. He believes that this drug in the eye is perfectly harmless even in strong solutions, however painful it may be, and there is no efficient substitute for it. The treatment of the first stage consists of this and the application of ice-cloths changed sufficiently often to keep them from becoming warm, and washing the eye with some mild collyrium to keep it free from pus. The danger is involvement of the cornea, and special care should be used to see that it is not injured. If involvement appears, cauterization is the best method, and if it goes so far as to produce bulging, it should be punctured as often as it occurs. Never abandon the case as hopeless. Many times the condition will terminate, leaving a more or less useful eye.

85. **Myopic Astigmatism.**—Thomson lays down the following general rules for the treatment of myopia and myopic astigmatism: 1. Give total spheric correction, or as near to it as possible, and insist on its being worn all the time. 2. Look carefully for low degrees of astigmatism and correct fully. 3. In high degrees of astigmatism, give the total correction so as to educate the retina, if possible.

93. **Major Operations with Ethyl Chlorid and Chloroform.**—Bloch advocates the use of ethyl chlorid locally, with primary chloroform-inhalation anesthesia. He thinks the cause of pain is direct irritation of the nerves by pressure and pulling, and that by this method the operation can be rendered painless and successful. In 267 patients thus treated, he has used only from 1 to 6 c.c. of chloroform when operating by this method. The ethyl chlorid is used by spraying after the patient has become anesthetic, the patient being apparently conscious considerable of the time.

98.—See abstract in THE JOURNAL of Dec. 2, 1899, p. 1419.

99.—Ibid., p. 1424.

101.—Ibid., p. 1419.

106. **Nerve Grafting.**—Peckham reports a case of motor paralysis of the left leg, following fractured spine, which had been partially relieved by laminectomy. Branches from the internal popliteal nerve to the gastrocnemius were divided and grafted into the external popliteal with the result of producing some slight improvement in muscular extension. Another patient with complete paralysis of the extensor muscles of the leg was similarly treated, with also partial improvement. He suggests dissecting out the nerve plate ending, or localizing it sufficiently to take a small amount of muscle containing it, and implanting this into the paralyzed muscle.

113. **Early Sign of Tuberculosis.**—Harrington calls attention to a widely dilated state of both pupils as an early sign of tuberculosis. He has come to associate it, from his observations, with the incipient stage of the disease.

114. **Diagnosis of Initial Tuberculosis.**—Cochrane, reviewing the signs of early tuberculosis, suggests the advantage in physical examination, of the following procedures: Removing all clothing to the waist, for any accuracy in auscultation or percussion; the use of the percussion hammer with a finger as a plexímeter in detecting areas of slight thickening; the advantage of "open mouth" breathing during auscultation or percussion; the advantage of forced inspiration and expiration during the examination of suspicious areas; the absolute necessity, for the evidence afforded, of examination of the sputum of all suspected cases; the employment of the tuberculin test in suspicious cases of very recent development, in which only indefinite conclusions can be reached by other methods of diagnosis.

118. See abstract in THE JOURNAL of Dec. 2, 1899, p. 1420.

119.—Ibid.

121.—Ibid., p. 1421.

122. **Pediculi and Enlarged Cervical Glands.**—Malone reports a case in a child, supposed to be scrofulous, with marked swelling of the glands, which appeared to be directly connected with head lice, and says he has seen numerous other cases similar to the one given. He calls attention to the fact of cervical swelling from this cause.

125. **Treatment of Diphtheria.**—Wood's paper is a very full discussion of the treatment of diphtheria. He has faith in the use of alcoholic stimulants and strychnin, and for local treatment he would use mild, unirritating methods, to avoid cardiac excitement. The better part of his paper is taken up with the subject of antitoxin, which he endorses, considers harmless and generally, if not invariably, effective.

126.—This paper, here printed as original, has appeared elsewhere: see abstract in THE JOURNAL of January 20, ¶ 130, p. 168.

FOREIGN.

British Medical Journal, January 6.

Observations on General Metabolism and the Blood in Gout. CHALMERS WATSON.—Watson reviews the subject of general metabolism and the condition of the blood in gout, and reports a case carefully observed, with blood examination and attention to excretion and diet. He thinks, from these results, that we must abandon the theory at present based on Garrod's observations. The following points appear to him to be established: 1. The alkalinity of the blood is not diminished during the gouty attack. 2. The excretion of uric acid is not diminished during the attack, but the reverse; therefore there is no ground for the supposition of any temporary diminution in the capacity of the kidneys to excrete uric acid. 3. The amount of uric acid in the blood is not greater during the attack than in the intervening period. Admitting these points, the cause of the acute paroxysm is still to be sought. He speaks of the advisability of more attention to histo-chemical characters of the blood, the ratio of uric acid to other important products of metabolism, and, if opportunity be found, examination of the bone marrow.

Lancet, January 6.

Acidity. JAMES F. GOODHART.—The author criticizes the common ideas as to diet, etc., in the controlling of uric acid production and excretion. His contention is that uric acid is a common product which may be considered as the ash, resulting from the workings of the many-chambered kiln of our bodies, and that the fault, if there is any, lies not in the ash or even in the coal, but in the driver or the driving power, which should regulate the process of combustion. The uric acid passer invariably presents problems each of which should be solved by itself. In one case the cause may be the visceral sluggishness which is a common outcome of nervous exhaustion, in another heredity, in another nervous shock, and it may simply be the beginning of senility. Each case must be judged by itself and treated accordingly.

Internal Derangements of Knee-Joint (Popularly Called "Slipped Cartilage"), Based on a Series of Two Hundred Cases. WILLIAM H. BENNETT.—The subject of loose cartilage in the knee-joint is treated by Bennett. He describes the symptoms and calls attention to the fact that there are some cases with no displacement whatever, but simply bruising of the peripheral edge of the semilunar cartilage and its attachments without displacements, the result being a local effusion of blood, and subsequent inflammatory exudation which acts as a foreign body. This class of injuries is, he thinks, more common than any other, though he has not seen it noticed in surgical literature. The treatment by rest is first mentioned, and he insists on the importance of massage of muscles and joints without movements, and this can not be commenced too soon. He notes with what rapidity the muscles of the thigh, and to a degree those of the leg, waste if left to themselves in this injury, and massage and exercise must not be limited to the wasted muscles of the thigh but should be applied to those connected with the iliotibial band, the gluteus maximus, and the tensor fasciæ femoris. The essential point is temporary rest of the joint and avoidance of rotation movement. As regards apparatus, he does not speak with great favor, and thinks that operative interference should be postponed until all other methods have failed to satisfy the patient. He does not think the operations entirely free from risk, and therefore even the exploratory ones are not to be attempted with perfect impunity.

Histology and Prevention of Blackwater Fever. W. H. CROSSE.—Crosse regards blackwater fever as simply a complication of malaria, basing his opinion on a thorough examination of a case in which he found nothing in the tissues dif-

fering from those usually found in malarial patients. Precautions necessary for its prevention are those given for malaria in general. As regards the abolition of malaria it would be impossible to destroy the parasites that produce it in extensive regions, though they may be destroyed around residences. He thinks the only way to stamp out the mosquito is to introduce some parasite which is inimical to it, into the countries which it inhabits, and he mentions one that he has heard of in western North America. The individual precautions should be general care of the health, avoiding chills, exposure, etc., moderation as regards alcohol, suitable food, proper water-supply, and the use of quinin, and return to a non-malarial climate.

So-Called Danger From Use of Boric Acid in Preserved Foods. OSCAR LIEBREICH.—In a recent article (*Lancet*, Nov. 11, 1899), Annett says that boric acid, if taken in small quantities, is injurious to health. Leibreich here points out what he thinks are the errors in his methods. He himself placed nine fowls on ordinary corn feeding for several days, and finding one showing signs of disease, withdrew it and carried on the experiments with the remaining eight. They were fed porridge containing boric acid to the amount of more than an ounce in a gallon, and in three days each of the hens had received about 2 grams without any signs of disease being noticeable. In the twelfth day seven of the hens received 1/2 gram of boric acid at 1 p.m., again repeated at 3 p.m. The eighth hen received 50 grams of sweet almonds. On the thirteenth day no sign of illness was perceivable, and the hens were perfectly well on the sixteenth. He thinks that this shows that experiments of Annett and Robinson are not reliable, and that something else must have been acting than the boric acid. He believes that it is very far from being proven by experiments that small quantities of boric acid, if used for a long time, are poisonous to adults and children.

Three Cases in Which Movable Kidney Produced all the Symptoms of Gall-Stones. T. J. MACLAGAN and FREDERICK TREVES.—Three cases are reported, producing all the symptoms of gall-stones: attacks of hepatic colic followed by jaundice were produced by pressure on the bile-ducts by the displaced kidney. The diagnosis of gall-stones was made by all physicians and surgeons who saw the patients, but in not one of them were gall-stones found. Murchison makes no allusion to this cause of jaundice, and it must therefore be added to his list. The authors refer to cases reported by Hale White and A. H. Cordier as somewhat similar.

Report on "Henpuye" in the Gold Coast Colony.—ALBERT J. CHALMERS.—The disease described occurs among the negroes on the West Coast of Africa, during or following an attack of yaws. It consists of a swelling on either side of the nose, produced by the deposition of new bone under the periosteum, growing slowly in all directions but not infringing on the orbital or nasal cavities in any way. Exceptionally only is it unsymmetric. It is accompanied by pain in the beginning of the disease, and later headache is felt, and pain during wet weather. The swellings may grow indefinitely and interfere even with sight, by their obstruction, or they may stop at any stage. It is more common in men than in women. He reports four cases. The treatment was operative, and Chalmers considers it as a localized osteoplastic periostitis.

Differential Diagnosis of Mongolism and Cretinism in Infancy. G. A. SUTHERLAND.—The differential diagnostic points between Mongolian idiocy and cretinism are here laid down. The chief are that the former is congenital; infants are lively and imitative; the skull is flattened anteroposteriorly; the palpebral fissure is small and oblique; the lips mobile; congenital heart disease common; the little finger short and curved; thumb short; the thyroid gland is normal, and treatment without benefit. In cretinism, on the other hand, the symptoms rarely appear before the sixth month; the infants are dull and impassive; the skin swollen and dry with fatty deposits in the neck; there are no characteristic skull deformities; the lips are thick and immobile; heart disease is rare; the fingers relatively normal, and thyroid glands absent or atrophied. When these symptoms are not marked, stress should be laid on the movements of the face and limbs of the Mongolian idiot, as compared with the dull inactive condition in the cretin. The final test is the therapeutic one.

Practitioner (London), January.

Pneumonia. WILLIAM H. BROADBENT.—After noticing the etiologic symptoms and physical signs, Broadbent expresses his belief that pneumonia is a disease of short duration, and that a large number of patients will recover without drugs. The temperature is high and there is no good in trying to reduce it. He thinks antipyretics are injurious, except perhaps in the very beginning. A single dose has been known to shorten the disease and occasionally an early dose relieves the pain and is therefore justifiable. The diet should be liquid. Stimulants are rarely necessary, but often useful, and should be reserved until they are indicated by small, weak and faltering pulse, dry tongue with restlessness or delirium. If a patient sleeps after a little brandy or champagne, or if the pulse becomes less frequent or larger, it has done good. In some exceptional cases a considerable amount of brandy may be required, and sometimes brandy in champagne seems to have a better effect than either alone. When sleeplessness is persistent and distressing, one may not hesitate to give a small dose of morphin hypodermically. It is all the more useful if there is delirium. When no drugs are really required, it is a comfort to the patient and friends that something is being done. Simple salines allay thirst and have some influence on the cough, especially when given in effervescing mixture, and are refreshing. Carbonate of ammonia and quinin may be given if the pulse flags. Strychnin is often of very definite service when the cardiovascular system shows a tendency to asthenia. It is best given in small doses hypodermically, at intervals of from twelve to four or three hours, and it is important to note that it may be required early. Digitalis may be extremely useful on occasion, but given at all periods of the disease its value is dubious. Inhalation of oxygen is of direct benefit when the face is livid and lips blue, and may possibly carry a patient through the dangerous phase of the attack, with strychnin and stimulants. Dr. Broadbent is not certain as to the benefit of ice bags, and poultices assiduously employed are distressing. One for three hours twice in twenty-four will be sufficient. In one particular complication, when invasion of the lung is so rapid that the right ventricle can not cope with the sudden resistance in pulmonary circulation and is paralyzed by overdistension, venesection may be of great service. He says: "The patient will be cyanosed, unable to speak, and scarcely able to breathe or cough; he will be sitting up in bed with his legs over the edge unless prevented, supporting himself on his hands, the veins of the neck and temple turgid, the eyes staring, the expression agonized and beads of sweat standing on the face and forehead. The pulse will be small and short, probably scarcely perceptible, while the heart will be found beating violently. It is scarcely possible to define the heart by percussion, but the right cavities are enormously distended, and the contrast between the cardiac impulse and the pulse shows that the blood is dammed back in the lungs so that it reaches the left ventricle in very inadequate amount. Under such circumstances the relief by bleeding is most striking. The pulse improves as the blood flows, the breathing is relieved, and when sixteeen to twenty ounces have been withdrawn all the distressing symptoms will have disappeared. The same results are not to be expected later, when asthenia has become a prominent feature in the symptoms, although, of course, there is a dilatation of the right heart. It has been already stated that delirium is common in the course of pneumonia. It usually subsides at the crisis, especially when with this there is a long quiet sleep. But it may persist and become more violent, or violent delirium may set in after the crisis. It is probably of toxic origin, the source of which may be the exudate absorbed into the blood, or it has been attributed to asthenia. The remedial measures are nourishment and stimulants, with strychnin and digitalin hypodermically."

Treatment of Pneumonia. WILLIAM GAIRDNER.—This author reviews the history and treatment of pneumonia within his recollection. His own generally employed method is mainly an expectant one, but he still uses antimony in very small doses, under certain conditions. He especially contends against the use of opium, which he thinks is a very dangerous remedy in pneumonia and pleurisy.

Mortality and Frequency of Pneumonia as Affected by Age, Sex, Seasons, and Habits. HECTOR MACKENZIE.—The

author analyzes the registrar-general's statistics of pneumonia in the United Kingdom, and finds that this disease causes nearly as many deaths as enteric fever, diphtheria, smallpox, measles and scarlet fever put together and, excluding children, its deaths greatly outnumber theirs. The mortality is greatest in males, especially after the age of 25, amounting to 5.6 per cent. of deaths from all causes, while in females the deaths are 4.8 per cent., and in males between 25 and 65 years of age, 8 per cent. of all deaths are due to this disease. He notices Dr. Wells' statistics as compared with those of the St. Thomas Hospital, which show a large mortality. From the total registered statistics he finds that, in a population of 30,000,000, at least 220,830 persons are annually affected with pneumonia, of which 31,950 die. As regards seasons, the coldest season, from November to February, seems to furnish the smallest number of cases, with the largest number occurring in the spring months. It does not seem to him proven that alcoholism makes an individual more susceptible to pneumonia, but it diminishes chances of recovery. Cold and wet are not so important in etiology as supposed. Kidney disease increases susceptibility. The relation of rheumatism to pneumonia is uncertain.

Pneumonia from a Public Health Standpoint. ARTHUR NEWSHOLME.—This writer analyzes the British statistics of pneumonia from the public health standpoint. He finds that in the decade 1881-90, one out of every eighteen deaths from all causes was registered as due to pneumonia. This shows a higher proportion than the preceding decade, probably produced by influenzal complications. The heaviest rate of mortality is found in the earliest, and next heaviest in the later years of life. The death-rate in females is more from the ages 10 to 15 than in males, but in all other periods lower. Comparing the deaths from pneumonia with those from phthisis and bronchitis, the death-rate from pneumonia between the years 1881 to 1890 was very slightly decreased, 1 per cent. only, and this was due to the lessened mortality in the earlier years of life; that from bronchitis was increased, while phthisis showed a very decided decrease at all ages. Only a small portion were due to transfers of deaths from phthisis to pneumonia, but it is doubtful whether the same statement can be made for bronchitis. A larger number of deaths take place in the colder months, the cold having a depressing influence, thus favoring the mortality. Regarding race, it appears that the natives of the tropics and especially negroes are particularly liable to the disease. Occupation has its influence, the smallest mortality being among professional men and farmers, while laborers in dusty employments and those engaged in the liquor business show the highest mortality. In concluding his article he notices epidemic and infectious pneumonia, showing the occurrence of each.

Medical Press and Circular (London), January 3.

Cinematograph and Teaching of Surgery. E. DOYEN.—This article, which was accompanied by demonstration before the British Gynecological Society, describes the use of the cinematograph for teaching and illustrating surgery. The author's first demonstration was made in 1898, in Edinburgh, thus establishing his priority, and he calls attention to the value of the method for students, as enabling them to observe what has not been possible in actual clinical demonstration. He believes that the surgeon may be benefited by showing his own operation, and be able to see where he can correct his errors. He claims that progress in surgery during the last few years has been due far more to the improvement of technique than to the observance of the laws of antisepsis, and that the cinematograph will demonstrate this better than any descriptions or photographs. It will show how the operations should be simplified and useless maneuvers done away with. The chances for the patient will be greatly improved, for in that matter especially "time is life." He says: "Lectures with the cinematograph should be given as follows: 1. The professor briefly describes the operation, and shows upon the screen projections of the principal instruments to be used. 2. Each step of the operation is shown in detail by fixed projections either of photographs or drawings. 3. When the technique is thoroughly understood the operation itself is shown on the cinematograph." If the professor has films of several cases of the same operation, he demonstrates the technique and the necessary modifications in the different cases. The students need no longer crowd the operating theaters as more or less intelligent on-lookers. They will be obliged to follow a preparatory course before they actually assist the surgeon. They will then be able to draw profit from his lectures and from the operations themselves. The application of the cinematograph may be considered one of the greatest improvements in the teaching of operative surgery, since it will make known throughout the world the best methods and the surest means of saving part of humanity from suffering and from death."

Intercolonial Medical Journal of Australia (Melbourne), Nov. 20, 1899.

Some Forms of Cystitis. ALFRED AUSTIN LENDON.—The author calls attention to a condition which has not been much noticed in text-books, and which he calls catarrhal cystitis. It is characterized by excessive discomfort without obvious change in the urine and no tendency to formation of pus, and is rapidly cured by drugs internally without the necessity of washing out the bladder. Of the other form, purulent cystitis, a case is reported, the intractability of which he credits to the fact that probably the ulceration of the mucous membrane did not yield to the treatment. He incidentally mentions the case of a boy with extroversion of the bladder, in whom he had, after several attempts, succeeded in implanting the left ureter into the rectum, but failed with the right. After operation the urine passed by the rectum was ammoniacal, while the bladder surface had lost that peculiar pungent odor which was previously so marked. He asks whether in his case of cystitis the decomposition took place in the kidneys or in the bladder, and offers the above as bearing on the question.

Bulletin de l'Academie de Medicine (Paris), Dec. 19, 1899.

Variations in Galvanometric Curve in Health and Disease. M. MENDELSSOHN.—In this communication Mendelssohn asserts that the variations in the galvanometric curve are important aids in the differentiation of organic and hysteric paralysis, and of secondary contractions of cerebrospinal origin —the result of descending degeneration, for instance—and hysteric contractions. We know that every contraction of the muscles is accompanied by a manifestation of electric energy which can be registered with the galvanometer like the curve obtained with the myograph. Mendelssohn establishes the identity of the two curves thus obtained whenever a muscle contracts under the influence of the will or of artificial stimulation. Organic and hysteric morbid conditions can be differerentiated by the different behavior of the galvanometer index in the second phase of the curve. It turns with the same rapidity in simple as in atrophic paralysis, but in the latter case the return to zero is very much slower, although still smooth and gradual. In case of contractions the return of the index to zero is very slow and is interrupted by two or three pauses, the index even retrogressing once or twice. This jerky curve is characteristic of hemiplegic contractions and is never observed in case of hysteric contractions. The difference is probably due to the fact that the muscle contracts all together, *in toto*, in hysteric, and by fasciculi in organic contractions. The curves registered in case of muscular contractions artificially induced, show a marked difference between simple and atrophic paralysis. In the latter the second phase, instead of duplicating the first is very much inferior to it, which can be accepted as positive evidence that the muscle has been invaded by degeneration.

Presse Medicale (Paris), Dec. 23, 27 and 30, 1899.

Capillary Embolism After an Injection of Calomel. A. RENAULT.—A young man with very extensive cutaneous syphilitic lesion was treated with subcutaneous injections of calomel, in the buttocks, 5 cg. each. Every precaution was taken; the needle was inserted first, detached from the syringe, and the improvement was manifest. The sixth injection, fifty-nine days after the first, was followed almost at once by intense dyspnea and distress, respirations 36, pulse 120 and marked stethoscopic symptoms. The syndrome gradually passed away in three or four days. Renault reviews a number of similar observations on record, all presenting the indications of a hemorrhagic infarctus in the lungs due to an embolic process, one fatal, and concludes that the insoluble mercurial salts are dangerous on this account, and should be reserved exclusively for extremely serious conditions, when immediate action is necessary, as in cerebrospinal syphilis or with grave visceral

lesions. It should only be used in other conditions after the failure of other methods of mercurialization, and then only when convinced of the integrity of the emunctories.

Heredity in Chronic Nephritis. R. ROMME.—"Eighteen cases of chronic nephritis in three generations of the family of a diamond cutter have recently been reported by Pel of Amsterdam. One daughter and her children and the children of another daughter have alone escaped. There are two cases of diabetes now in the third generation."

Respiratory Gymnastics in Pulmonary Tuberculosis. E. RIPARD.—The emaciation of tuberculous subjects is not merely the disappearance of adipose tissue, but is due to an actual muscular atrophy which should be combated in the treatment of the disease. The subjects should be trained in gymnastics, to restore strength to the muscles engaged in respiration, as these are the most important in their case. First they should be trained to hold themselves erect. This is easiest learned by having them lie flat on the back for a few minutes to an hour several times a day, without a pillow, on a hard bed. The elbows should be held back in walking and now and then the subject should take a few steps on tiptoe, which throws the chest forward. The reclining favors both circulation and respiration and the subject soon learns to prefer the erect position. Yawning is one of the best methods of exercising the respiratory muscles, driving the air all through the lungs and evacuating residual air. The subject is instructed to yawn voluntarily four or five times in succession several times a day. But the most important therapeutic measure of all is to keep him cheerful and get him to laugh often. Laughing is the gymnastics for the lungs par excellence. "No air lurks in the alveoles after a hearty laugh." Letulle organizes concerts several times a year for his patients in the Boucicaut hospital, as a therapeutic measure. "The delight of the patients should be seen to be appreciated. They talk of the entertainment a fortnight beforehand and keep laughing over it for several weeks afterwards." The gymnastic exercises practised at the Boucicaut are simple and require no special apparatus. One is to stand with the hands on the hips, rise on tiptoe and then, returning to normal, turn the head and trunk around to the right and then to the left. Another is to raise the arms and breathe deeply; drop the arms and expel the air. Two persons face to face take hands and slowly try to push each other back in turn without moving the feet. Other exercises are with the arms alone while reclining on the hard bed. "It is only sufficient to do some of these gymnastic exercises yourself to realize their effect on the respiratory muscles. And above all, never forget the laugh."

Treatment of Salpingo-Ovaritis by Ablation of Both Tubes and Partial or Total Preservation of One Ovary. F. JAYLE.—The systematic preservation of part or the whole of an ovary is far preferable to total castration, as this avoids all post-operative trouble from the artificial menopause. If the ovary is sound, it is left entire, but if not, Pozzi seizes it with the thumb and finger to ensure hemostasis and immobility. The morbid portion is circumscribed with two deep incisions, and the organ resected until sound tissue is reached, even if only a fifth of it is left. The edges of the wound are perfectly coaptated and sutured with fine catgut, stitches not over 5 mm. apart and drawn up very gently but effectively. They should be intraovarian and not be seen in the depths of the wound, like the stitches with Emmet's needle in a perineorrhapy. These maneuvers are delicate and add to the length of the operation, but the results fully justify them. A number of observations are appended showing the benefits of this systematic preservation of even a fragment of an ovary, one dating from 1897, menstruation regular, no post-operative troubles.

Progres Medical (Paris), Dec. 23, 1899.

Hydatid Cyst of Left Frontal Lobe. Operation, Large Loss of Cerebrospinal Fluid: Recovery. J. E. ESTEVES.—This communication from Buenos Ayres states that hydatid cysts are becoming more and more frequent in the Argentine Republic. Ten operations for such cysts of the brain are on record in local publications; six recoveries. Most of the cases were drained, but the observation reported by the writer is the only one with a ventricular communication that recovered. The cyst was the size of an orange and had destroyed almost the entire frontal lobe. Some of the contents escaped during the operation, into the cerebral cavity, wiped out afterward with gauze. The dura mater was sutured with fine silk and the osteocutaneous flap and scalp were also sutured as water-tight as possible, to which fact Esteves attributes his success; no lavage, no draining. There was slight emphysema and edema, which soon ceased, and the patient, a girl of 13 years, had resumed her normal intelligence, which had been long clouded, with other symptoms due to the pressure of the cyst in this region, when nine days after the operation the strabismus returned with vomiting and pain and the dressings were wet with a transparent yellow fluid—estimated by weighing the dressings before and after application at 800 grams a day—for eight days, when it gradually subsided. Two or three months after the operation the mouth is still slightly drawn to one side and strabismus and mydriasis still persist. The intelligence seems normal with the peculiarity that the girl is subject to motiveless fits of laughing. Tests of the fluid from a number of hydatid cysts showed it non-toxic, and in seven cases absolutely sterile.

Semaine Medicale (Paris), Dec. 27, 1899, and January 3.

Tuberculides. LEREDDE.—Under this heading Leredde groups erythematous lupus, acnitis, indurated erythema and Mibelli's angiokeratoma, regarding each as a toxituberculous angiodermitis. They form a natural group, he states, from the anatomic as well as the etiologic point of view and clinically bear a close resemblance. There are vascular lesions in all, limited to dilatation, obstruction or hemorrhages of the capillaries, or affecting the larger vessels; arteritis and phlebitis are constant in the three first. The presence of cell accumulations around the vessels, the proliferation of connective tissue, the phenomena of degeneration, are evidently connected with the irritation produced by agents proceeding from the vessels. The lesions may begin deep and not approach the surface until later. These various forms of tuberculides may be associated in pairs and coexist in the same individual. Tuberculous infection elsewhere is frequently noted with them. He disapproves of the term scrofulide, as nothing now remains of the old term scrofula except the conception of a special organic medium on which certain affections develop electively and in a different manner from their development in other individuals: the cutaneous tissues are especially liable to infection and other peculiarities as, for instance, the gradual slitting of the lobe of the ear by the weight of the earring, noted by Besnier in every case of this kind in his service. Leredde concludes with the practical inference that every person affected with tuberculides should be regarded as a tuberculous subject, requiring first of all internal and hygienic treatment—superalimentation, aëration, hydrotherapy—the weight taken regularly, auscultation, cod-liver oil, arsenic and tannin, systematically employed. The dermatologist should never confine his measures to merely local treatment. He will obtain results with general antituberculosis treatment beyond what external therapeutics will ever afford as he attacks the cause instead of merely the effects.

Surgical Treatment of Ascites with Cirrhosis of the Liver by Artificial Production of Peritoneal Adhesions.—Eight observations are now on record in which the attempt has been made to cure this ascites by establishing collateral routes for venous circulation, as described in THE JOURNAL, xxxiii, p. 222, and elsewhere. The results were positive in 5; the ascites recurred in 2; 1 died from a concomitant nephritis. "These facts proclaim the value of the procedure especially when it is borne in mind that all the cases had resisted repeated tappings. Subpubic drainage is counterindicated on account of the danger of infection, and the measures to induce adhesions must be extremely gentle, scraping the serous surfaces very lightly in order to induce the formation of delicate neomembranes which are usually deficient in blood-vessels." The latest observations included in the above were reported recently by Rolleston and Turner. (See abstract in THE JOURNAL, xxxiv, p. 37.) They scratched the surface of the liver and diaphragm with a sponge and the nails, and tied the omentum between the liver and diaphragm with a kangaroo tendon passed through the margin of the liver, omentum and peritoneum; no drainage. One patient is very much improved, although a slight ascites still persists 4½ months after the intervention. The ascites has recurred in the other notwithstanding frequent tapping.

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Beitraege z. Pat. Anat. xxvi, 3.

Finer Structure of the Liver Cell. A. SZUBINSKI.—The writer's investigations have established the existence of two excretory systems in the liver cell; the bile system and the glycogen system. Each is entirely distinct. The glycogen system starts in the vicinity of the nucleus and spreads in the finest little canals through the body of the cell, winding in every direction and finally reaching the blood capillaries. It is evidently an accessory of the circulatory system. The bile system is coarser and the tubes expand into vacuoles in case of stagnation of the bile. He deduces a plausible explanation of the etiology of icterus from these facts.

Berliner Klinische Wochenschrift, Dec. 25, 1899.

Specific Treatment of Tuberculosis. J. PETRUSCHKY.—To the question whether Koch's treatment will permanently cure tuberculosis, Petruschky replies with a most emphatic affirmative, and refers to twenty-two cases permanently cured for four to seven years by his personal method of applying Koch's treatment. They represent 33 per cent. of the entire number he has thus treated; four were advanced cases. The diagnosis was based on the clinical symptoms and presence of bacilli, the cure is asserted from the absence of both and the failure of tuberculin, frequently tested, to induce the slightest reaction, months and years afterward. He calls his method "treatment by stages." It is based on the experience that tuberculous subjects treated according to Koch's method until they have lost their sensibility to tuberculin—although all the tuberculous tissue has not been expelled—regain their former sensibility to tuberculin after three or four months. This regained sensibility favors treatment as, after this interval, an effective tuberculin treatment can be inaugurated once more, and this resumption repeated as long as the sensitiveness to tuberculin recurs. Two of these stages were sufficient in most cases for the definite extinguishment of bacilli and symptoms. Subjects exposed to acute attacks of secondary infection required a little longer. All have been kept under observation and tested from time to time with the tuberculin. All attempts to cure tuberculosis by some brief procedure are based on an erroneous conception of the nature of the affection and of the healing process. Foci of different ages usually coexist. He adds that persons dismissed from sanatoria, supposed to be cured after a brief course, are a special source of danger, as the bacilli may appear again in the sputa while the subject is unaware of his condition and trusts the assertion that he has been permanently cured. "Irrational methods of application are to blame for the failures with the Koch system of treating tuberculosis." The sensibility to tuberculin increases after one reaction. After the first distinct reaction in nearly every case the dose should be kept the same or slightly reduced.

Deutsche Zeitschrift f. Chirurgie, liii, 3 and 4.

Operative Treatment of Pseudo-Arthrosis. WEISS.—"Resection of the ends with consecutive suture, and autoplastics in case of large defects with a flap of periosteum, or bone and periosteum, is the method to be recommended in these cases." Weiss adds that ten patients were cured in this way, the edges denuded obliquely or in steps or wedge-shaped. The cure required four weeks to a year.

Conditions and Technic of Operative Removal of Pressure on the Brain. BEREZOWSKY.—Six patients operated on to relieve traumatic epilepsy have been cured without relapse during nine years to five months, out of eleven thus treated. In these cured cases a palpable cause for the intracranial pressure was found and removed, and the floor of the defect had not become completely ossified; traumatic cyst in 4; deep scar after cerebral abscess and acute accumulation of fluid with a Z-shaped fracture, one each. Adhesion of the brain was noted in all. The causes of the five relapses were accumulations of the drained fluid or chronic alcoholism, incomplete operation or epilepsy of too long standing—seventeen years. Treatment of traumatic epilepsy coincides in general with the treatment of an "impression fracture:" removal of everything that might occasion pressure, prevention of the ossification of the defect in the skull, removal of pathologically altered portions of the brain, evacuation of all subarachnoid or intracerebral cysts, long drainage of the lateral ventricle. Berezowsky's experiments with silver plates to prevent adhesion of the bone flap proved a failure, and he now recommends peripheral excision of the exposed dura in such a way as to leave three bridges. He has thus recently treated three patients with genuine epilepsy. [Habar now reports twelve cases in which a celluloid plate healed in place without reaction.—*Wien. Klin. Woch.*, Dec. 7, 1899.—ED.]

Memorabilien (Heilbron), Dec. 30, 1899.

Shun Superfluous Fat in Diabetes. F. v. OEFELE.—This writer called attention some time ago to the affections of the pancreas noted *intra vitam* in a large proportion of diabetics: fatty degeneration, lithiasis, neoplasms, etc. He has lately been investigating the feces of fifty-seven diabetics, and finds that the strength of the diabetic seems to depend more on the amount of the fat waste in the feces than on the amount of sugar waste in the urine. Numbers with 3 and 4 per cent. sugar were physically vigorous, while others with only 1/3 or .25 per cent. were exhausted by five minutes of exercise on a level. The loss of undecomposed fats in the feces parallels the loss of physical energy still more closely. Diabetes with 4 to 10 per cent. undecomposed fat in the feces were comparatively strong, while in others with 10 to 13 per cent. there was marked loss of energy, and 13 to 16 per cent. corresponded to extreme debility. This elimination of undecomposed fats is always accompanied by a larger or smaller percentage of decomposed fats and unused albumin enveloped in fat. This waste of fat must not be disregarded, and substitution of the carbohydrates by fats must be strictly warned against. A forced fat diet would be utilized far less than a carbohydrate one in these circumstances. Oefele sometimes supplements his treatment of diabetes by the administration of sapo medicatus coated with salol or keratin.

Therapie der Gegenwart (Berlin), November, 1899.

Influence of Massage on Morbus Basedowii. ZABLUDOWSKY.—No patient has been cured, but numbers have been wonderfully relived and improved by systematic vigorous massage of one side of the thyroid gland at a time. The gland substance is taken up between the fingers of both hands and squeezed horizontally and vertically. If the patient is very sensitive Zabludowsky massages with one hand alone, while with the other he produces vibrations by tapping on the spine. This vibration, combined with intermittent pressure on the points where the nerves are accessible in the neck to the vibrating finger, has a marked effect on the morbus, both direct and by irradiation and by reflex action. It stimulates the cardiac vagus and sensory nerves. The muscles are stimulated in turn by resistance gymnastics following the massage.

Treatment of Hemorrhoids. I. BOAS and F. KAREWSKY.—Boas denounces the theory that a bland diet is beneficial in case of hemorrhoids, claiming that it is absolutely injurious, especially sweet milk, on account of the lack of stimulation of the peristalsis, which should be promoted in every way. The most important measure in treatment is the toilet of the anal region after defecation with a solution of tannin or alum on a cotton wad. An ascending douche is recommended still more highly. "The results of massage or electric treatment rarely pay for the trouble." If enemata are necessary, a soft sound should be used, and all irritating substances like glycerin, salt, etc., should be avoided. Purgatives should be strictly rejected except in extreme cases, when a gentle purgative may be taken. To control hemorrhage persisting even in spite of normal feces, he warmly recommends a teaspoonful of fluid extract hamamel. Virginica in a wine-glass of water three times a day for four weeks, then twice a day for a month, and then once a day for another month. In case of severe hemorrhage he administers a powerful dose of opium and then tampons the bleeding spot with gauze. After it has been arrested for three days he gives a dose of castor-oil.

Anemia Gravis as Consequence of Hidden Hemorrhoidal Hemorrhages. C. A. EWALD.—Observations are related in which puzzling anemia was finally traced to completely ignored hemorrhoidal nodules high up in the rectum, the external portions normal, and the subjects with no suspicion of their hemorrhoidal tendency.

Atropin in Asthma. RIEGEL.—It has been the writer's experience that a subcutaneous injection of .5 to 1 mg. of atropin during the attack will relieve or arrest it, and that the attacks with this treatment grow less and less frequent, and finally cease altogether after it has been administered in this way a few times.

Wiener Klinische Rundschau, Dec. 10, 24 and 31, 1899.

Experimental Investigation of Knee-Jerk with Injury of Upper Spinal Cord. A. MARGUELIES.—The knee-jerk was permanently increased in rabbits and dogs after the spinal cord had been cut across between the fifth and sixth cervical vertebræ, while it was abolished completely in others in which the spinal cord had been crushed by the blow of a hammer on a wedge or by direct crushing with a blunt instrument inserted inside the dura. The difference in the nature of the injury evidently determines the nature of the results, possibly on account of the shock which accompanies a crushing injury. Reviewing Sherrington's experience with monkeys and this research, and comparing them with experiences in human pathology, it seems probable that the permanence of the effect depends on the intensity of the lesion and also on the rank of the subject in the animal kingdom. In man the knee-jerk is always abolished for a long period after total division of the spinal cord, and occasionally after partial. In monkeys it is abolished for about three weeks; in the lower animals for a still shorter interval and soon reappears with merely partial injury. These facts impart increased value to the knee-jerk as an indicator of the severity of the lesion, of the prognosis and of the necessity for surgical intervention.

Electrodiagnostic Studies of Motor and Sensory Excitability in Nervous Diseases. J. ZANIETOWSKI.—This communication exalts "condenser discharges" above the usual galvanic or faradic current as a much finer quantitative test of progressing and retrogressing pathologic changes in cases of increased or diminished excitability. This is especially important in the diagnosis of incipient stages, momentary latency, exacerbations, simulation, etc. Condenser discharges are easily manipulated and applied; the nature of the excitation is known, and can be expressed in exact unities, and they supply an excellent basis for comparative tables. They may even prove to be a qualitative test for certain affections, such as dystrophia muscularis progressiva and Thomsen's disease. He begs others to apply and study them, anticipating that perhaps better methods of treating nervous affections may be deduced from more careful study of their manifestations by this means.

Wiener Klinische Wochenschrift, Dec. 14 and 28, 1899.

Plague Research.—WEICHSELBAUM, ALBRECHT and GHON.—This comprehensive report of the Austrian committee sent to India to study the plague, includes its subsequent experimental research and the Trieste case, which explains the outbreak of the plague in places supposed to be uncontaminated. There were no anatomic nor clinical indications of the identity of the disease to be found in this case beyond "pyemia of unknown origin" with roseola vanishing on pressure toward the last. The abscess-like foci were disseminated through the liver, spleen, kidneys, lungs and in the quadriceps on both sides. Only the discovery of plague bacilli in these foci established the diagnosis post-mortem. Such a case of unsuspected plague might easily start an epidemic. The disease had a more chronic character than usual in this case, thirteen days and more. The committee recommend guinea-pigs as the best animals for experiments, and the best method, inoculation by rubbing the cultures on a shaved spot, preferably one of the hind legs. The characteristic primary bubo of the group of lymph glands in the region can be detected in twenty-four to forty-eight hours by this method, using the sputum, saliva, feces or urine, according to the localization of the lesions or the contents of the bubo derived by puncture or an incision, which latter they deem an advisable therapeutic measure.

Influence of Mechanical Excitation of the Liver on the Heart. M. HEITLER.—The writer reported in 1896, that in certain cases of arrhythmia the variations in the pulse correspond to variations in the size of the heart, liver and spleen: with large area of heart dulness and small pulse, the area of dulness over the liver and spleen was limited and vice versa. A striking observation of this peculiarity was recently observed which also presented another phenomenon: when the liver was tapped or shaken the small pulse became large and full and the heart area smaller. The subject was a young man of vigorous aspect, who, after a severe course of study, complained of headaches, vertigo, palpitations. The heart sounds and the pulse varied in intensity from day to day or hour to hour. The pulse varied remarkably with mechanical stimulation, tapping or shaking the heart region and still more the liver region. This effect lasted from one-half minute to ten. Mechanical stimulation of other parts of the body had no effect on the pulse.

Two Cases of Primary Carcinoma of the Tube. J. FABRICIUS.—Both patients were women of 41 years, and the right tube had already been removed in one on account of a papilloma, which suggests that the carcinoma had developed from a similar growth in the left tube. The second case was alveolar and this had possibly also developed from a primary papilloma. The first was diagnosed correctly; the second was supposed to be a hydrosalpinx on account of the copious watery discharge noted for two weeks, then ceasing for ten to twelve days, when it recurred again and continued as before. The first symptoms were pain in the sacrum and the back. Intestinal disturbances have been sometimes noted, but the most important indication is the behavior of the menses, irregularities or hemorrhages after the menses have stopped, or the watery discharge noted above. Tubal carcinoma seems especially liable to early metastasis.

Transplantation of Ovaries. E. KNAUER.—The ovaries which Knauer transplanted in rabbits in 1896 not only healed in place and continued their ovum-producing function, but the functional activity persisted as long as in the normal animal, about three years, and the organ was found similar in every respect to the normal physiologic organ at this stage. One of the rabbits had a litter after transplantation. Experiments with ovaries transplanted from one rabbit to another were failures. Halban has found that if the ovaries are removed from newly born animals, the rest of the genital apparatus remains infantile but if the ovaries were not removed entirely but merely transplanted elsewhere, the genital organs developed normally. In all the cases in which the ovaries healed in place the specific tissues were found well developed, and even a scrap of tube found clinging to one of the ovaries showed normal ciliated epithelium. Experiments have been in progress for some time with testicles transplanted into females and ovaries into males.

Chronica Med. Mexicana (Mexico), November, December and January.

Maximum Dose. E. L. ABOGADO.—The doses of opium given as the maximum in the various pharmacopeias of the world are compared in a table, showing the amazing differences between them. The dose of the powder, for instance, according to the French Codex is 1 to 10 centigrams; German, 15 to 20, and Foy's formulary gives 4 to 5 grams as the maximum dose. The writer urges the general adoption of the statement of the *initial* dose for an adult, leaving it to the physician to determine how much this can be increased by observation of the effect on the patient.

Revista Medica (Mexico), Nov. 15, 1899.

Local Anesthesia Previous to Thermocauterizing. D. MEJIA.—Two parts of ice to one of salt, with which half a yard of prepared intestine is filled and both ends tied, is the simple means of inducing local anesthesia which Mejia has been using successfully for years, previous to applying the thermocautery. The packed gut is wound in a flat coil over the spot to be cauterized, and left for eight to twelve minutes, never longer, as this would compromise the vitality of the tissues.

Chronica Medica (Lima, Peru), Nov. 15 and 30, 1899.

Pathologic Histology of Peruvian Verrugas. O. HERCELLES.—One month every year is devoted, by the profession in Lima, to the memory of young Carrion, the martyr to science a few years ago, who became convinced that Peruvian verrugas and the disease known as Oroya fever were identical, and to prove it inoculated himself and recorded a remarkable study of the disease as it progressed to a fatal termination. His last words to his confrères were: "I have commenced the work and leave it to you to finish." Odriozola has since published a classic volume on the subject and every year some contribution is offered. This year it is an illustrated histologic study of the verrugas, which establishes the fact that each lobule is merely the result of reaction of the tissues to a lesion of a blood-vessel induced by the verrugas germ. The vessel is the starting point of the morbid process, the center around which the lobule develops, and the lobule is nothing but the manner in which the organism reacts to the verrugas germ. The opening of a vessel is seen in the center of each cross-section of a lobule.

Societies.

Winnebago County Medical Society.—The annual meeting of this Society was held in Rockford, Ill., January 16. The election of officers resulted in: president, T. N. Miller; vice-president, P. L. Markley; secretary and treasurer, J. H. Frost.

Bradford County Medical Society.—The annual meeting of this Society was held at Towanda, Pa., recently, and the following officers elected: president, W. F. Harshburger; vice-president, M. C. Hunter; secretary, S. M. Woodburn; treasurer, F. D. D. Newton.

Chester County Medical Society.—The January meeting of this Society was held at West Chester, Pa., the 9th. The following officers were elected: president, Edward Kerr, Downington;; vice-presidents, Jacob Price, of West Chester, and Dr. Neil, of Coatesville; treasurer, Mary H. Smith, Parksburg; secretary, S. H. Scott, Coatesville.

Atlantic City Academy of Medicine.—The Academy held its annual meeting at Atlantic City, N. J., recently, and elected the following officers: president, W. Blair Stewart; vice-president, Edgar Darnall; secretary, Theodore Senseman; treasurer, Walter Reynolds.

Pasadena Medical Society.—The meeting of this Society was held in Pasadena, Cal., the 13th, for the purpose of electing officers for the ensuing year, and the result was as follows: president, J. H. McBride; vice-president, Dr. Abbott; secretary and treasurer, J. E. Janes.

Alameda County Medical Society.—The annual election of officers of this California Society was held at its annual meeting at Alameda recently, and resulted as follows: president, Joseph Milton; vice-president, H. N. Rowell of Berkeley; secretary, Mira Knox; treasurer, Carl Krone.

Lebanon County Medical Society.—At the election of officers held by this Society at its recent meeting, at Lebanon, Pa., the following were chosen: president, E. E. Grumbine; vice-presidents, U. G. Risser and S. P. Hilman; secretary, C. M. Stuckler; treasurer, A. S. Reiter.

Leavenworth County Medical Society.—This Kansas Society held a session in Leavenworth on the 11th inst., and elected officers for the ensuing year, as follows: president, Dr. McNeary of the Soldiers' Home; vice-president, S. B. Langworthy; treasurer, Dr. Van Emen; secretary, J. R. Weber.

Buncombe County Medical Society.—At a recent annual meeting of this Society, held at Asheville, N. C., the following officers were elected: president, H. L. Boyd; vice-president, F. P. Cheesborough; treasurer, C. V. Reynolds; recording secretary, J. T. Sevier; corresponding secretary, E. R. Morris.

Lackawanna County Medical Society.—The annual election of officers of this Society, which held its meeting in Scranton, Pa., recently, resulted as follows: president, L. Wehlau; first vice-president, Anna Law; second vice-president, Henry Gibbs; secretary, F. W. Davis; treasurer, L. M. Gates.

Warren County Medical Society.—The regular monthly session of this Society was held in Mirror, Pa., on the 9th inst. Election of officers for the ensuing year resulted as follows: president, O. S. Brown; vice-presidents, C. J. Frantz and J. J. Knapp; treasurer, John Curwen; secretary, J. R. Durham.

Delaware County Medical Society.—This Society held a meeting in Chester, Pa., January 12, and elected the following officers: president, David M. McMasters, Ridley Park; vice-president, Dr. Gallagher, Glen Olden; secretary, L. F. Fussell, Media; treasurer, D. W. Jeffries, Chester; librarian, Samuel Trimble, Lima.

Toledo Medical Association.—At the annual meeting held the 12th, by this Association, the following new officers were elected for the ensuing year: president, William H. Fisher; vice-president, C. William Newton; recording secretary, Charles P. Wagar; corresponding secretary, Nelson H. Young; treasurer, James A. Duncan.

Franklin County Medical Society.—This Society met in Chambersburg, Pa., January 16. The following officers were installed: president, H. C. Devilbliss, Chambersburg; vice-presidents, J. C. Greenawalt, of Chambersburg, and A. Barr Snively, of Waynesboro; recording secretary, J. J. Coffman, Scotland; corresponding secretary, H. V. Bonelbrake, Chambersburg; censor, R. W. Ramsey, Chambersburg.

Venango County Medical Society.—This society held its bi-monthly meeting in Franklin, Pa., the afternoon of the 16th, and elected the following officers for 1900: president, J. M. Murdoch, Polk; vice-president, William Varairan, Titusville; secretary, E. W. Moore, Franklin; treasurer, C. W. Coulter, Oil City. The next meeting will be held in Oil City on March 20.

Eastern Ohio Medical Society.—The following officers were elected at the recent session of this Society, held in Steubenville, Ohio: president, W. L. Carroll, Toronto; vice-presidents, J. W. Martin, of Unionport, W. A. Hobbs, of East Liverpool, J. E. Miller, of Cadiz, and A. R. Ong, of Martin's Ferry; recording secretary, J. F. Purviance; corresponding secretary and treasurer, J. C. M. Floyd.

Rocky Mountain Inter-State Medical Association.—At the last regular meeting, held in Salt Lake City, Utah, the following officers were elected: C. K. Cole, Helena, Mont.; first vice-president, Leonard Freeman, Denver, Colo.; second vice-president, R. Harvey Reed, Rock Springs, Wyo.; treasurer, Charles G. Plummer, Salt Lake City, Utah; recording secretary, Donald Campbell, Butte, Mont.; corresponding secretary, S. D. Hopkins, Denver, Colo. The next meeting will be held in Butte, Mont., Aug. 28 and 29, 1900.

Western Surgical and Gynecological Association.

Proceedings of Ninth Annual Meeting, held at Des Moines, Iowa, Dec. 27 and 28, 1899.

FIRST DAY—MORNING SESSION.

After an address of welcome by Dr. Lewis Schooler, which was responded to by Dr. B. B. Davis, and the presentation of the report of the Committee of Arrangements the reading of papers was begun.

SURGERY OF BILIARY PASSAGES.

DR. B. B. DAVIS, Omaha, Neb., read a paper based on an experience in seventeen cases. The writer limited his remarks to: 1, infections; 2, adhesions to surrounding viscera, and 3, gall-stones. Three main routes were given by which bacteria reach the bile tract: By way of the portal vein, by way of arterial circulation, and by migration up the common duct from the duodenum. Pus in the gall-bladder and duct were deemed an absolute indication for operation, as were the existence of painful adhesions that give rise to chronic invalidism.

Considering their etiology, the writer was convinced that all gall-stones are the result of infection combined with poor drainage. Mucus, pus and clumps of bacteria were thought to be the nuclei about which cholesterin and other bile salts are deposited, and without such a nucleus, it was impossible for gall-stones to form.

The writer asserted that after all gall-stones and sand had been removed, and thorough drainage and irrigation kept up until all inflammation and irritation had subsided, recurrences are unknown without a new infection. This was made the reason of a plea for careful and thorough drainage after every operation, the so-called "ideal" cholecystotomy being condemned.

A case was reported in which anastomosis of the gall-bladder with the duodenum was accomplished by means of a Murphy button, for cicatricial stenosis of the common duct. The tissues gave way and almost all food ingested made its way out through the fistula, death resulting from starvation twenty-five days after the operation.

Another interesting case of perforation of the cystic duct by pressure of a sharp corner of a large impacted stone was reported.

HOW TO PREVENT AND HOW TO TREAT UNUNITED FRACTURES.

DR. A. C. BERNAYS, St. Louis, Mo., followed with a paper on this subject. His experience was based on notes of 20 cases of ununited fracture of the femur, 12 of the humerus, 8 of the patella, 11 of the tibia, 6 of the ulna, 1 each of the radius, the metacarpal bone of the index finger, the clavicle, and 2 of the inferior maxilla. Those were treated in a surgical practice of twenty-three years. He laid great stress on the point that repair takes place in all diseases or injuries most quickly and satisfactorily under the influence of rest. The reason why the aseptic and antiseptic methods of wound treatment are better

than all previous or older methods is because they keep away from wounds the most mischievous agents of unrest that can possibly affect wounds. To give rest should always be the chief aim of the art of surgery, and the surgeon who practices his art in such a manner as to secure the most perfect rest possible under the circumstances, for the diseased or injured parts which he treats, will be the most successful surgeon.

Dr. Bernays drew the following deductions in closing his paper:

1. The antiseptic and aseptic methods of wound treatment are better than all previous methods, because they help to insure physiologic rest to injured tissues by preventing the condition of unrest known in medical literature as infection.

2. Non-union of a simple fracture is always due to a constitutional vice if it follows after proper and long-continued approximation and fixation. 1 Non-union can, therefore, always be prevented by proper approximation and immobilization in the absence of a constitutional vice. 2. It follows, then, that an unknown or a known form of constitutional vice must exist in cases where non-union results after proper approximation and immobilization of a fracture. 3. It is furthermore clear and must be maintained by all surgeons, that if proper approximation and immobilization are practiced and continued for a long time, the attending surgeon can not be held responsible for a resulting non-union. The non-union must have been due to an existing constitutional vice which can not always be recognized.

3. If, after a certain length of time, the dressing, cast, splint, or apparatus is removed and non-union is found, there are only three conditions possible: *a*. The dressing, cast, splint or apparatus failed to properly approximate and fix. *b*. The time of treatment was too short. *c*. There exists a constitutional vice. The first of these three possibilities is by far the most common and is the cause which, when recognized, can be easily removed.

4. After all of the known methods of treatment of ununited fractures, be they the simple bloodless friction of the ends or any of the bloody operations, such as drilling, nailing, wiring, sawing, or clamping, approximation and immobilization must be maintained in order that bony union or consolidation may take place.

5. The so-called ambulatory treatment of fractures of the lower extremity, while often giving good results, will be followed by delayed union or non-union more often than the treatment in bed, because of failure to secure proper rest.

6. In old cases of non-union of simple fractures, it is a good plan to save all of the chips or sawings of the bone which are removed when preparing and shaping the ends, and to replace them between and around the fragments or ends of the bone before removing the Esmarch bandage. After the tourniquet is removed, the whole wound and the spaces between the fragments and chips will be filled with blood, and if one has been aseptic, the best plan will be to close the wound entirely and put to rest with a view of leaving the dressing untouched for a period of from seven to ten weeks.

7. In cases of fracture of the long bones, the use of an anesthetic for the purpose of getting perfect apposition and fixation is indicated.

8. The old rule that the joint above and below the fracture must be included in the immobilizing apparatus, cast or splint, can never be safely broken. It is a good rule and should always be observed.

First Day—Afternoon Session.

DR. JAMES E. MOORE, Minneapolis, Minn., read a paper on "Acute Suppurative Arthritis of Children," which will appear in THE JOURNAL.

DR. CHARLES C. ALLISON, Omaha, Neb., followed with a paper on "Acute Infective Osteomyelitis."

DR. J. E. SUMMERS, JR., Omaha, Neb., contributed a paper on "Surgery of the Common Bile-Duct," which will appear in THE JOURNAL.

THE VAGINAL ROUTE.

DR. O. BEVERLY CAMPBELL, St. Joseph, Mo., read a paper on this topic. He said that in choosing between the vaginal and suprapubic routes, the one should be selected in each individual case which will offer the greatest advantages for complete work, with the least possible danger to the patient; or where complete work is inadmissible, as in some cases of pelvic abscess, the most favorable route should be selected for incision and drainage.

In defense of the vaginal route in dealing with pelvic inflammation, it is claimed that through an anterior or posterior incision the fundus can be delivered through the incision, the ovaries and tubes in turn delivered, and radical or conservative work practiced. That such work can be done in many instances is true, but it can be done better, with less risk to the patient and with more perfect results in the vast majority of cases of pelvic inflammation through the suprapubic route. The Trendelenburg position offers superior advantages in dealing with this class of cases. The chief objection that has been offered to it is that with the pelvis on such a recline, the drippings from the pelvis are likely to enter the abdomen. The essayist has sought to overcome this objection by the construction of a table which somewhat modifies the Trendelenburg position; the patient is placed in this position and allowed to remain eight or ten minutes, while the abdomen is given a final treatment preparatory to operation. She is then drawn six inches higher up on the table, the pelvis now resting on a level plane six inches wide. The intestines will have gravitated while the patient occupied the Trendelenburg position, and will not be affected by drawing the patient higher, allowing the pelvis to rest on the level plane. This modified position offers, in his judgment, all the advantages of the Trendelenburg, and a few superior ones.

Where an operation can be performed as safely and as completely through either route, then he would give the vaginal route the preference. The vast majority of women will submit to an operation through the vaginal route with less apprehension than where the incision is to be made in the abdomen. Indeed, very many women will submit to an operation through the vaginal route who would not submit to an operation through the suprapubic. The occurrence of ventral hernia and abdominal scars deserves consideration only where an equal choice between routes is to be considered.

The essayist then pointed out a class of cases which can be safely operated on through the vaginal route, and among them he mentioned interstitial or subserous uterine fibroids. Vaginal hysterectomy may be performd in any of the varieties of uterine fibroids where the size of the tumor will warrant such a procedure. Retrodisplacements of the uterus, adenocystoma of this organ, and many cases of tubal pregnancy could be dealt with through the vagina.

Dr. Campbell cited some cases where it would not have been good surgery to have operated by the vagina. In multiple abscess cases with the so-called spider-web adhesions, he considers it impossible to successfully treat them through the vaginal route. He is willing to give the preference to the vaginal route in all cases where either route may be selected with equal chances in doing conservative complete work. However, he is not convinced that the vaginal route offers equal advantages with the suprapubic in the majority of cases of pelvic inflammation.

DR. W. JEPSON, Sioux City, Iowa, read a paper entitled "What Should Be Our Treatment of Fractures of the Anatomic Neck of the Humerus Complicated by a Dislocation of the Head?"

First Day—Evening Session.

At this session President Crowell delivered an address entitled "Some Things." This will be published in THE JOURNAL.

Second Day—Morning Session.

THE X-RAY AND ITS USEFULNESS.

DR. J. RUDIS-JICINSKY, Cedar Rapids, Iowa, contributed a paper on this subject. The question of the value of the X-ray in the diagnosis of bone surgery seems to be settled. The author urged the more general use of X-ray examinations by the profession, and pointed out the necessity of great refinement, and experience in examinations on the part of the practitioner, in order to correctly interpret the varying shadows, as well as a thorough knowledge of anatomy, pathology and physics.

As to the usefulness of the X-ray, it detects and diagnoses fractures and dislocations; it sees correctly the position of the fragments of a broken bone, before reduction and after, or

whether the surgeon has a fracture or a dislocation, or both, to deal with.

DR. M. L. HARRIS, Chicago, read a paper entitled "The Longitudinal Wire Suture in Radical Operation for Hernia," which will be published in THE JOURNAL.

DR. D. C. BROCKMAN, Ottumwa, Iowa, followed with a paper on "Oöphorectomy for Functional Nervous Diseases Occurring During Menstruation."

SECOND DAY—AFTERNOON SESSION.

CYSTOSARCOMA OCCURRING SIMULTANEOUSLY IN BOTH OVARIES.

DR. VAN BUREN KNOTT, Sioux City, Iowa, read a paper with this title. The essayist had been unable to find in the literature at his command many cases of double ovarian sarcomata. Eastman, in over two thousand celiotomies, has only once found sarcoma in both ovaries at the same time. Dudley, of Chicago, considers the condition very rare, as does Baldy. Price has operated on a few cases of double ovarian sarcomata of large size, all of which were complicated by universal invasion of surrounding tissus.

The writer reported a case, the points of interest being: 1, the simultaneous involvement of both ovaries by sarcomatous growths, as sarcoma is usually found on but one side; 2, the almost exact similarity of the tumors, it being difficult to distinguish one from the other; 3, the absence of adhesions or the involvement of neighboring viscera, both of which conditions are almost always present with sarcoma of the ovary; 4, the age of the patient (47), as sarcomata usually occurs in early life; 5, the fact that the prognosis in this case would seem to be much better than in the vast majority of ovarian sarcomata where contiguous tissues are usually infiltrated by the disase at the time of operation. He said that it is yet too soon to consider the patient as cured, as the operation was only done three months ago.

CYSTIC TERATOMA OF THE OVARY COMPLICATED WITH HEMORRHAGE.

DR. E. HOKNIBROOK, Cherokee, Iowa, presented a paper on this subject. The patient, aged 22, married three years, had one child eight months old, which she is nursing. Always healthy, she was never conscious of any growth or abnormality in the pelvis. She was taken with excruciating pain while straining at stool, fainted and suffered from shock. A small tumor was discovered in the right iliac region, which increased and produced general peritonitis. Celiotomy was performed forty-eight hours after the onset of the symptoms. Death from peritonitis resulted forty-four hours after operation.

The right Fallopian tube was found to have been severed close to the uterus and its end covered with peritoneum; no ovary was found on the right side; the left ovary and tube were normal. The tumor was found attached by a short thick pedicle, to the iliac fascia.

Pathologist's Report.—There was a cystic tumor with a thick outer wall containing a smaller tumor within. The covering of the outer wall, partly peritoneum, contained in a fold a part of the Fallopian tube with its fimbriated end. No ovarian tissue could be discovered. The outer wall contained striated muscle and well-developed bones, the type of which could not be determined. This wall was sacculated and contained blood clots. The inner wall, that is, the covering of the smaller tumor, was found to be dermal tissue with glands and hair. Within this tissue were many pockets or loculi containing either sebaceous matter or blood—the sebaceous matter predominating. In none of the saccules were the blood and sebaceous matter mixed, but separated by distinct walls. Some of the blood was undergoing organization. No ovarian tissue could be found. No placental structures could be made out. The tissues were too well developed to be fetal.

Diagnosis: cystic teratoma of the ovary complicated with hemorrhage.

One end of the Fallopian tube, with its fimbriated end being found in the walls of the tumor and the other end still attached to the uterus, would indicate that the growth commenced in the tube, and developing slowly, amputated the tube and anchored itself to the iliac fascia, where it was found attached. The history of the case and the pathologist's report negative the theory that it might have been ectopic gestation. The recent investigations of Professor Norman, of Texas, and Professor Loeb, of California, were cited to show that the absence of certain chemicals or their effects being neutralized might permit of even the human female being endowed with the potentiality of reproduction, and that "an immaculate conception may be the result of unusual but natural causes."

CONGENITAL HIP-JOINT DISPLACEMENT.

DR. JOHN PRENTISS LORD, Omaha, Neb., read a paper on this topic. Dr. Lord adopted the word "displacement, agreeing with Tubby that "the word dislocation, as commonly accepted, implies separation of those parts of a joint which have never been normally in contact—therefore the word displacement is more accurate. The pathology of veritable cases teaches us that there has been no perfect acetabulum formed from which the head of the femur could have been dislocated."

There are two classes of cases as met with in after years, viz., the truly congenital and the traumatic; the latter form is not probable unless favored by a deficient acetabulum, at the upper part of the rim.

Girls furnish the majority of cases, estimated as high as 88 per cent., because more subject to deformity, according to Dupuytren, who, with others, has observed heredity. The etiology is unknown. The various mechanical and pathologic theories have been mostly discarded. The development theory is supported by pathologic research and is generally accepted.

The symptoms are characteristic and mostly dependent on locomotion. Therefore cases are seldom recognized until walking is begun, the child waddles, has lordosis, which is not conspicuous early, but soon becomes marked in bilateral cases. The limbs are short and slender. The perineum is broad, and feet everted, trochanters prominent above Nélaton's line, and there is exaggerated lordosis. The pelvis becomes altered, the ilia are approximated, and the ischia separated, which improves the female pelvis for parturition.

Any well-informed physician should quickly recognize these cases. In the early years of this deformity the disability is noticeable and, in bilateral cases, the rolling, waddling gait, with a growing tendency to exaggeration of the symptoms resultant on stretching of the soft parts, which yield on fatigue. In persons of good muscular development the conditions remain stationary, and they get along with a fair degree of comfort and have good endurance, but some are much handicapped and suffer acutely, more especially after increase in weight and muscular enfeeblement. The dorsal displacements furnish the worst cases, the anterior and superior displacements the most favorable ones.

The methods of treatment are three: 1. Extension either in recumbent position or by apparatus. 2. Forcible reduction. 3. Reduction by operative measures.

The mechanism of the hip-joint is so defective in these cases that our credulity is taxed to believe that much permanent good can be accomplished short of operative measures. While many successes have been reported, the cases do not seem to have stood the test of time, and quickly relapse without mechanical support.

The Lorenz operation is not a formidable one and is as fully justifiable as many other operations which are done without hesitation. The anterior incision quickly reaches the capsule, and the division of the Y ligament removes the principal resistance in young subjects. The head of the femur is usually easy to retain in the new acetabulum by proper application of plaster above the trochanters, which also includes the trunk and legs, which are maintained in abduction and slight inward rotation.

The uterus should be drained, and only skin sutured at its angles. The plaster dressing should be continued for six weeks, after which an apparatus or a long side splint should be applied for a variable time, to prevent accident, and passive motion be begun and gradually increased. Motion is quite fully restored within a few months. The limp continues for a time, because of muscular weakness and habit, but improvement is progressive, whereas cases without treatment become continually worse. Some limp always remains, because of inevitable shortening in all cases.

The writer exhibited photographs of a boy of 3½ years, operated on by lateral displacement, with five centimeters shortening. The operation, Aug. 20, 1899, resulted in no shock, and in uneventful recovery. He was permitted to walk about in

eight weeks, and had good motion on leaving the hospital, with one centimeter shortening.

The more recent statistics show this operation to be comparatively free from danger, and the writer believes that cases can be operated on earlier than 3 to 6 years of age, to advantage, because there is less resistance to reduction in the young, and consequently less cutting is required. Both for surgical and mechanical reasons, operation appeals as the only rational treatment. That increased experience with improved technique will establish this operation on a firm basis, seems assured.

DR. A. L. WRIGHT, Carroll, Iowa, reported a case of "Hematoma of the Vulva and Vagina."

GASTROENTEROSTOMY IN CARCINOMATOUS OBSTRUCTION OF PYLORUS.

DR. G. G. COTTAM, Rock Rapids, Iowa, read a paper on this subject. The author drew attention to the high primary mortality rate following pylorectomy, and emphasized the fact that the indications for its performance must be very rare. In no case should it be attempted when there is any involvement of the adjacent lymph nodes. Gastroenterostomy, with its lower primary death-rate and immediate relief of urgent symptoms is an elective procedure which the author advocated for all advanced cases of pyloric carcinoma offering a reasonable hope of being able to withstand the shock following an abdominal operation of moderate severity. He argued that with improved technique in suturing, and rapidity of execution, the operation should add nothing to the dangers already incurred by the progress of the disease. The histories of two cases in which he had recently performed gastroenterostomy by the method of Wölfler, as modified by Rockwitz, were then related.

The first case was that of a German woman, aged 44, who began to show symptoms of gastric ulcer six years previously. These had partially subsided under treatment, when symptoms of pyloric obstruction set in, followed later by a profuse hemorrhage. Three weeks after the latter, one week after the case was first seen by the author, he opened the abdomen in the median line between the ensiform cartilage and the umbilicus. A hard growth of the pylorus, adherent to the left lobe of the liver, with neighboring lymph nodes enlarged, was readily made out. Three inch incisions having been made in the stomach and jejunum, the latter were sutured together, first by a continuous through-and-through silk suture, followed by Halsted's mattress sutures, involving the fibroserous coats only. The patient lived nearly one month, dying of double pneumonia. The stomach symptoms entirely abated. Autopsy revealed absence of all signs of leakage or its results at the site of the operation, firm union having resulted. The pathologic report of Dr. E. F. Tiedemann, St. Louis, stated the growth to be a scirrhous carcinoma originating in the cicatrix of a healed ulcer. The specimen was exhibited.

The second case differed materially from the first, except as regards the details of operation. The patient, aged 64, born in Ireland, had been in rugged health until but nine weeks preceding operation. Then he began to retch occasionally, losing flesh, and was finally unable to retain anything. There was a tumor in the epigastrium, absence of peristalsis below the stomach, and absence of HCl in the gastric contents, noted at the author's first examination, which took place on the day of operation. The prognosis was very grave, but with the hope of relieving the extreme symptoms a gastroenterostomy was undertaken. Complete occlusion of the pylorus was found, with collapse of the small intestines. The patient lived one week, dying of exhaustion from the original disease. There was no vomiting after the operation, but the vital powers were so low that there was no absorption of nutriment. Autopsy showed perfect union of the stomach and bowel without leakage, and no peritonitis. The specimen has not yet been examined microscopically, but the tumor is unquestionably malignant.

New York Neurological Society.

Annual Meeting, New York City, Jan. 2, 1900.

FACIAL AND RETROBULAR NEURITIS: PERIOSTITIS OF OPTIC CANAL.

DR. WILLIAM M. LESZYNSKY presented a woman of 38 years, who first came to him Oct. 11, 1898. There was then a complete facial paralysis of the left side, of five weeks' duration. There had been a loss of taste, but the eyes had remained normal. Severe pain and tinnitus in the left ear, lasting several days, preceded the facial paralysis. Galvanism had been used in the usual manner. Two months later, while under treatment, she complained of severe pain in the left supraorbital and left temporal regions. This pain was continuous for over a week, when she became totally blind in the left eye. The pupil was absolutely immovable, and the ophthalmoscope showed edema of the papilla, but nothing else. Within a week a well-marked papillitis could be detected in the left eye. The vision in the right eye was normal. Under mercurial inunctions, and iodid of potassium internally, the vision improved somewhat, and on November 4, in the right eye, was 22/100. She now had optic atrophy, but the vision had decreased. The faradic irritability had returned, but was still below the normal. A diagnosis of facial neuritis and a retrobulbar neuritis arising from periostitis in the optic canal had been made—a very unusual condition. Dr. de Schweinitz, Philadelphia, recently reported two or three such cases, but in them the retrobulbar paralysis had developed nearly a year and a half after the neuritis. The case also showed that a return of faradic irritability did not necessarily mean a return of motility.

DR. G. M. HAMMOND asked whether uremia could be absolutely excluded in the case presented.

DR. LESZYNSKY said that a complete absence of all urinary signs and symptoms had been noted. The neuritis seemed either of rheumatic or syphilitic origin. There were some elements in the case that had led him to think it possibly of syphilitic origin.

SYRINGOMYELIA.

DR. JOSEPH COLLINS presented a man whom he had been asked to see a few weeks ago, by Dr. Powell, who had removed a small lipoma from the lumbar region, having no connection with the spinal cord or membranes, contrary to the opinion that had obtained before operation. He was 36 years old, and had contracted syphilis nearly five years ago. Since then he had been under almost constant treatment. He had complained of weakness in the right leg, pain in the back, and slight numbness in the left lower extremity. Careful inquiry elicited the fact that while still a boy he had experienced difficulty in keeping the right leg in the stirrup when riding horseback, and had noted in that foot what had really been a clonus. The knee-jerk was exaggerated on the right side, and there was also ankle-clonus on that side. There was absolute thermo-anesthesia from the fourth intercostal space on the left side down to the tip of the toe. The diagnosis was syringomyelia.

DR. RICHARD H. CUNNINGHAM recalled having tested the sensation of this patient some time ago, but did not remember the existence of thermo-anesthesia. He had always looked on the case as one of tumor of the cord, and not as essentially syphilitic.

DR. PEARCE BAILEY said that several similar cases had been met with at the Vanderbilt clinic during the past three or four years. It is the custom there to examine regularly for such anesthesia, and while he did not recall the individual case, it was exceedingly probable that if thermo-anesthesia had been found it would have been noted and remembered.

DR. L. STIEGLITZ was inclined to accept Dr. Collins' view of the pathology, although it was unusual to find such extreme spasticity in such an early stage. He asked whether there was any muscular atrophy present anywhere in the body, and if there was any change in the sympathetic supply to the eyeball.

DR. C. L. DANA also looked on the condition as syringomyelia Some of the cases of slowly developing spastic paralysis without sensory symptoms seem to him to be really examples of early multiple sclerosis. He has seen such cases develop characteristic eye symptoms after many years.

DR. GRAEME M. HAMMOND had had an opportunity of examining this man, and entirely agreed regarding the clinical symptoms. He accepted the diagnosis given by Dr. Collins, and said this case was certainly not one of recent development. He could not classify it except as one of syringomyelia.

DR. JOSEPH COLLINS, in closing, said that the right lower extremity was 1½ inches smaller than the left. There were no vasomotor disturbances of the face. In the beginning there might have been an area of gliomatosis, which had, at first, connected with the central canal.

TUMOR OF AQUEDUCT OF SYLVIUS OR OF CEREBELLUM; DOUBLE JOINTS.

DR. JOSEPH COLLINS presented a man, aged 18, exhibiting all of the cardinal symptoms of tumor of the aqueduct of Sylvius, or of the cerebellum. It had first been noticed that he was lethargic about three years ago. Fourteen months ago, while climbing into a window, he had fallen, and shortly after this he had begun to vomit and to suffer from periodic headaches. These were followed by increasing sleepiness, and by a disturbance of the gait. His limbs could be thrown around and the joints bent backward in a remarkable way. The knee-jerks were feeble. There was no nystagmus, and no true cranial nerve palsies nor ocular ones. Both eyes showed choked disc and slight pigmentation.

DR. C. L. DANA considers this peculiar drowsy condition characteristic of tumors in the aqueduct of Sylvius, and extending forward into the third ventricle, yet, in other respects, the symptomatology was that of a cerebellar tumor. If the tumor were in the aqueduct of Sylvius, it could not be causing much distension or infiltration or there would be some eye symptoms. The weight of the evidence seemed to favor a tumor in the cerebellum. He thought it possible that the double-jointed condition had been increased by the present affection.

CASE OF HEMORRHAGIC ENCEPHALITIS AND MYELITIS.

DR. CHARLES L. DANA and DR. M. G. SCHLAPP presented a report of this case. The patient, a man of 67 years, had come under observation last June. There was no clear history of intemperance. His previous health had been good. During the last seven years he had been somewhat of an invalid. On June 4, 1899, he complained of headache, and after taking two cups of tea, went to bed. A few hours later he fell out of bed, and it was then discovered that he had a left hemiplegia. He was removed to Bellevue Hospital, his temperature 104 F., but this quickly fell. He could not protrude the tongue, and it was almost immobile. He was paralyzed almost completely on the left side. The lips were markedly affected, the abdomen somewhat rigid, the patellar reflexes normal, and ankle-clonus was absent. Sensation to heat and cold was normal. The urine showed nothing abnormal. Four days after admission he had a chill and the temperature rose to 105.5 F., while examination of the blood showed the malarial plasmodium. After having been in the hospital for one week, it was noted that there was no paralysis of the right arm or leg, and the most notable feature was the paralysis of the tongue and lips. He was unable to make any distinct articulate sounds. He could swallow and cough, and understood perfectly what was said to him. Death occurred on June 25.

At the autopsy, made by Dr. Dana, only the brain and cord were examined. Slight edema and congestion of the arachnoid was noted. The vessels of the base were not atheromatous. In the right hemisphere there was an area of capillary hemorrhage and softening in the lower portion of the posterior central convolution, and superior part of its marginal gyrus. It involved mainly the deep part of the upper lobe of the fissure of Sylvius. In the centrum ovale were two or three smaller areas of hemorrhage. There was no evidence of hemorrhage or softening in any part of the cerebrum, cerebellum or pons. The spinal cord showed two foci of softening, one in the upper dorsal and the other in the lumbar portion. The brain was hardened in formalin, and stained by various methods. The microscopic examination showed, in the affected area, much dilatation of the blood-vessels, small extravasations of blood, a great proliferation of cells, showing an irritative reaction to the hemorrhages —in other words, the evidence of an encephalitis, apparently secondary to the disease of the blood-vessels. There were also small areas of softening of the brain in the neighborhood of these hemorrhages, also the result of the breaking and obliteration of the vessels. The walls of the latter were somewhat thickened, but gave no evidence of a syphilitic process. The examination of the rest of the brain failed to show any evidence of sclerosis. The medulla showed no evidence of softening or of inflammation. Examination of the spinal cord had not yet been completed, but the cord showed a small center of poliomyelitis in the dorsal region. Below this was a more extensive poliomyelitis, involving both the anterior and posterior horns. The appearances very closely resembled those described by other writers on encephalitis hemorrhagica.

Regarding the occurrence of speech disturbance in a case of this kind, Dr. Dana said that in the great majority of patients with this form of hemiplegia there is no speech disturbance except a few days after the attack. This might be ascribed to shock. In another class of cases of hemiplegia there is a slight uncertainty in speech, lasting for several months. In another class the hemiplegia is associated with some difficulty of speech, and sometimes true aphasia. He has never observed any sensory aphasia in these patients. When the lesion is well below the cortex, involves the motor neuraxons and the collaterals going to the opposite hemisphere, there would be some hesitation in speech; when the lesion is still lower down, there would be no disturbance of speech. A very general opinion prevails to the effect that bulbar palsies of cerebral origin are due to lesions in the lenticular nucleus, but our present knowledge of the anatomy of the brain makes such a view untenable. Concerning the disturbance of the tongue, he said that Dr. Collins, who had given a critical description of this subject, placed the tongue center in the anterior and upper part of the foot of the anterior central convolution. Some of the centers of the movement of the tongue are probably deep in the fissure of Sylvius, and not subject to experimental stimulation. In the patient under discussion mastication and deglutition were not impaired. The case also brought up the subject of non-suppurative encephalitis, and it seems to be established that there is an infectious hemorrhagic encephalitis in infants; also a hemorrhagic poliomyelitis in adults; and an acute hemorrhagic encephalitis of adults due to some acute infection such as influenza. In the case presented there was a distinct history of malarial infection and of alcoholism, and this combination was responsible for the lesions discovered. Such a case might be classified under the name of degenerative hemorrhagic encephalitis. An examination of the autopsy records of 67 cases of apoplexy showed that 42 of them were hemorrhagic, 11 embolic, 11 thrombic and 3 encephalitic.

DR. E. D. FISHER agreed with the reader of the paper that, in a small percentage of cases, there might be an encephalitis, and that the spinal cord might also be involved. He has seen cases affecting the right hemisphere in which the aphasia was permanent. It is not common for such persons to lose the memory of names and things, but he could recall a few such instances. He does not believe enough fibers pass over from one side to the other to account for that. The right hemisphere is the region in which the center of speech is fixed, and while it is more accentuated on the left, the right can not be entirely excluded. This belief he bases on his own clinical experience.

DR. B. ONUF thought that, as a rule, dysarthria rarely occurs in connection with lesions of the internal capsule; but is more often met with in lesions of the cortical foci. He has observed it most frequently with lesions of the left hemisphere. To explain this he assumes that all the articulatory muscles are represented in each hemisphere, and that the center of the right hemisphere is subordinated to that of the left through the fibers of the corpus callosum. If there is a lesion of the right hemisphere, there might be a temporary dysarthria; if, however, there is a lesion of the left hemisphere, the dysarthria would be permanent. On the other hand, if the lesion is in the internal capsule, whether on the right or on the left, the dysarthria would occur. If the dysarthria is marked, the lesion is almost certainly in or near the cortex. He believes that there is a double speech center, and that of the right hemisphere is subordinated to that of the left.

DR. FISHER asked whether Dr. Dana had noticed any difference in the character of the articulation in the first few days between a right hemiplegic and a left hemiplegic. Personally, he has found as much difficulty in the one case as in the other.

DR. COLLINS thought the paper proved that a single lesion is capable of producing diffuse and multiple lesions in the central gray matter. This is the first communication of the kind ever presented in this country. It called attention to the possibility of an acute malarial infection giving rise to such a process. The changes discovered in this examination were those which might be theoretically expected. He did not see how this report could have much effect on the question of aphasia, because serial sections of the entire length of the medulla oblongata had not been presented—indeed, he was doubtful whether the patient had had true aphasia.

DR. M. G. SCHLAPP said that the inflammation in the medulla seemed to be a very recent one. There was a small round-cell infiltration, but the large proliferating cells found in the cortex were not present. The infiltrating and the proliferating stage were both represented in the cortex.

DR. DANA, replying to Dr. Fisher, said that, in his experience, dysarthria occurs about as often with right hemiplegia as with left, and that it is practically due to the size of the lesion. If this is very large and the hemiplegia complete, there is almost always dysarthria. Where there is only slight hemiplegia associated with dysarthria, it is probable that the lesion is high up in the cortex, or involves a part of it. He had not thought that this case illustrated aphasia, but rather dysarthria. The weight of evidence in this case seemed to indicate that a paralysis of the tongue was the result of a cortical lesion—a sudden apoplectic lesion. There had been absolutely no hemorrhagic process in the medulla.

UNUSUAL CASE OF LEAD PARALYSIS WITH AUTOPSY.

DR. B. ONUF reported this case. The patient was 37 years of age, and a man of good family and personal history. He had been a painter for many years, and had had one attack of lead colic some years ago. A short time ago he received a severe fall, and for some days afterward seemed dazed. From March to August he did no painting, then began again, with colors containing a large percentage of lead. He kept this up during August, but suffered frequently and severely from colic. At the end of August he became quite ill and, in three or four days, almost helpless in the lower extremities and in the left arm.

On admission to St. Catharine's Hospital, in September, 1899, there was complete flaccid paralysis of both lower extremities; absence of both knee-jerks; marked tenderness of the nerve trunks and muscles of the lower limbs. There was also paralysis of the flexor muscles of the left arm and of the extensors of the fingers. The gums showed a "lead line." The spontaneous pain ceased under diaphoretic treatment. On October 4 he had an attack of severe dyspnea, and on the following morning died in a second and similar attack. At autopsy, the extensors and flexors of the right arm were found wasted, as were also the peroneal muscles and the flexors of the thigh. The left lung was the seat of a bronchopneumonia. Microscopic examination showed what appeared to be a poliomyelitis of the anterior horns. The parts examined so far were the second and fifth lumbar, and here there was an enormous infiltration of the walls of the blood-vessels, with round cells. This infiltration was so extensive as to lead to very general distension of the nerve-cells. The anterior roots were markedly affected, but the posterior ones of the lumbar region were normal. The plantar nerve showed increase of connective tissue and endarteritis obliterans. The liver was examined by Dr. Bookman, but no lead was found. As five weeks had elapsed, such evidence is not of much importance.

DR. L. STIEGLITZ said that this case showed, in the human being, exactly what he found in his case of experimental lead poisoning. In experiments on thirty-six animals he only obtained an acute poliomyelitis at the post-mortem in one guinea-pig, and also cell infiltration and more or less destruction of the nerve-cells around the foci. This guinea-pig had been paralyzed acutely, and death occurred within twenty-four hours. In his experimental cases he obtained, in every instance, changes in the ganglionic cells themselves. The case presented in the paper was an atypical one of lead poisoning, and hence would not justify any conclusions regarding the ordinary pathology of that poisoning. The cases reported by Oppenheim and by Herter seemed to him the most typical.

DR. E. D. FISHER thought the clinical history of this case corresponded more with that of alcohol than of lead poisoning. As a rule, in cases of lead poisoning, the lower extremities are the part first involved. Some years ago he called attention to the occurrence of these degenerative changes in the brain and cord in cases of alcoholism. It, therefore, seemed to him that the case reported combined both alcoholism and lead poisoning. The changes in the central nervous system are quite well established.

DR. W. M. LESZYNSKY said that it also seemed to him that the reader of the paper had not proved the connection between the lead poisoning and the post-mortem findings. The case appeared to be one of alcoholic toxemia, or of some acute infectious process.

DR. HAMMOND said that while it was very probable that the man had suffered from lead poisoning, he very much doubted whether the lead had anything to do with the condition of the spinal cord; it was much more probable that this was the result of some acute infectious process. He did not believe a case of true lead toxemia had been reported in which such changes in the nervous system had been observed.

DR. CUNNINGHAM some weeks ago met with a case of lead palsy in a man who at the same time had developed a mild form of influenza. The phenomena observed were quite similar to those reported in the paper.

DR. COLLINS also took the ground that in addition to the lead poisoning there had been an alcoholic neuritis or some acute infection giving rise to the changes in the spinal cord.

DR. ONUF said that the frequent attacks of colic during the last few weeks the man had been able to work, seemed to show the close connection between the lead poisoning and the other symptoms. Cases of alcoholic neuritis usually present quite a different picture from that exhibited by his patient. The autopsy revealed evidence of a certain amount of alcoholism, but the man had not been drinking for a considerable time previously, and there was no history of an acute infectious process.

Chicago Ophthalmological and Otological Society.

Dec. 12, 1899.

(Concluded from Page 169.)

KERATITIS DENDRITICA.

DR. WILLIAM E. GAMBLE presented a patient who came under his observation ten days before, saying he had had a sore eye for a month previously. At no time had he had severe pain. At times the eye became more sore, accompanied by more photophobia and increased lacrimation. He complains that at about 2 a.m. in each day there is a profuse flow of tears which lasts for a considerable time, after which his eye feels better. As to the appearance of the eye, there was some pericorneal injection and a superficial keratitis. There is no history of foreign body or other injury. There is no history of the patient being ill for several years, excepting that last June he had sore throat with a fever one day, the temperature reaching 103 F. He has not had any herpetic eruption on the face or other parts of the body, nor has he had any catarrhal troubles with mucous membranes. He has lived in Chicago since 1892 and occupies a second flat. His general appearance corroborates this history.

The etiology of this case is not clear. It does not come under the class, keratitis herpes corneæ of Horner, for the reasons above given, i. e., the history shows no herpetic eruption about the face nor trouble with the respiratory tract. However, he did not see the case early enough to determine whether the keratitis began as vesicles or otherwise. Kipp, in 1880, described a series of cases of superficial keratitis complicating malaria, in which the ulceration often assumed a serpiginous form. He called these cases malarial keratitis.

Dr. Ellet, of Memphis, has this year described ten cases of keratitis dendritica, in which an examination of the blood was made. Plasmodia malariæ were present in nine of the cases.

Hansen-Grut, the Danish ophthalmologist, in 1884, described a series of cases that had come under his observation, as being superficial chronic keratitis with a tendency to become serpiginous, which was not identical with Horner's type; neither did he commit himself on the etiology of the cases he described as keratitis dendritica.

The blood of this case was carefully examined for plasmodium malariæ, by Dr. E. L. Brown, assistant pathologist, Illinois Charitable Eye and Ear Infirmary, with negative result. Quinia has no appreciable effect on the progress of the disease. In the absence of more definite knowledge this case might suggest the keratitis dendritica idiopathica, and thereby aid in the classification of these obscure conditions.

DR. F. C. HOTZ—I have seen a number of these so-called dendritic cases in years gone by, and the majority of them, so far as we could confirm our diagnosis of malaria by the efficacy of quinin treatment, were of a malarial nature. In several in-

stances the treatment had been conducted on general principles of keratitis, with atropin, etc., without benefit, or without making any impression on the inflammation. The inflammation, however, quickly subsided as soon as quinin was given. In one case the patient had periodical attacks at regular intervals; he felt very comfortable and the eye exhibited only a slight indication of inflammation on one day; the next day all the symptoms increased, with violent pain, lasting from ten o'clock in the morning until two in the afternoon. In this case quinin broke up the attacks promptly, and in a few days all signs of inflammation had disappeared. I do not think it is claimed that these cases are all of a malarial origin; there are other factors which may bring about a similar eruption, but I am inclined to think that this typical linear ulceration, creeping over the cornea from the margin, and branching out with fine linear offshoots is, in the majority of cases, of malarial origin.

PECULIAR VISUAL PERVERSION.

DR. F. C. HOTZ presented two patients with an affection entirely new to him. The first, a girl of 10 years, was brought by her mother, who two weeks previously had given her medicine for nocturnal enuresis. After she had taken the medicine for one week, her pupils were enlarged, and her sight disturbed, so the medicine was discontinued, but the visual disturbance persisted. Two years previously, in taking medicine under similar circumstances, her sight had likewise been disturbed for some time. She could not read with a book in the proper position, but could do so quite fluently with it upside down. At twenty feet the test types seemed inverted, but when turned upside down the letters appeared straight and she read correctly to the number 30 inclusive. With the 2.5 D. before the eye she could read the same letters as if they were in the right position. But large objects like persons and houses did not look to her to be upside down. The second case presented somewhat similar disturbance in a boy of 6 years, but in this instance no medicine had been given. The boy was not naturally left-handed, but he wrote as we see in a looking-glass: for 18 he wrote 81. He held the book at an angle of 90 degrees, or even upside down, but could not read with it in the correct position. With a 2.5 D. before the eyes he could read with a book in the correct position or while under the influence of homatropin, and five weeks later his mother did not notice any further signs of visual perversion.

DR. HENRY GRADLE—I can not strictly talk pertinently to the subject, as I have never seen any case like the one of Dr. Hotz. His cases, however, remind me of the extensive neurologic literature on reversed or mirror writing. About twenty years ago the attention of neurologists was called to that subject in connection with attempts at writing with the left hand, by patients with right-sided palsy. It was noticed then that many of these patients, in attempting to write would reverse the letters, and in following up the subject it was found that this, too, was not uncommon among the insane, even where there was no motor palsy of any kind. Furthermore, it was learned that children, in first learning to write, occasionally wrote in the same way. As far as I am aware, this subject has not received much attention recently. In this connection it would be interesting to know how the first girl wrote.

DR. HOTZ—I did not test her writing.

DR. GRADLE—The quick recovery of the first girl would lead us to refer the trouble to some central disturbance of a functional character, coming under the head of what is called, with more or less justice, hysteria; but this is simply a term and does not involve any accurate knowledge. It simply means the disturbance of some central process of such a transient character that it can return to the normal on very slight provocation, although it may last almost indefinitely when no interference occurs which returns the innervation to its proper channels.

DR. ALBERT B. HALE—If one might venture an opinion, one could say that this is probably an obliteration of the acquired experiences of the human mind, and a primary interpretation of direct optical phenomena as we are supposed to get them from our visual apparatus.

Some time ago I informally discussed the strange conditions under which my own child was learning his alphabet. I caught him at it one night. He began with A and wrote it in an inverted position. He wrote U inverted and P reversed. For two or three weeks he showed the inversion of type, but soon got over it and has manifested no symptoms of inversion since.

In the *Annals of Ophthalmology*, years ago, there appeared an article by a man in California, who submitted himself to severe tests of patience by arranging a contrivance in which he produced, in the air, an inverted image, and then sat with his head in a box for a week or so until he accustomed himself to the inverted image; he claimed that interpreted the outer world about as well as a person does with experiences of his own and races of past life.

I do not claim this as an exact scientific interpretation. We know that the connection between the optical condition of the retina, and the condition of the brain when interpreting such phenomena is still unexplained; if as we certainly know, there are, in certain abnormal psychic states, lapses of experience and recession to the original and primitive conditions, we may suppose some such analogous process here, with the result of a (temporary) visual inversion.

DR. THOMAS A. WOODRUFF referred to a three-year-old child who, in looking at picture-books, always preferred to have them upside down. This was more noticeable when the child was two years of age than in the last year. If given a picture-book or single picture right side up, she would always turn it upside down, and seemed to see the pictures better in that position. The child is fond of looking at pictures of babies, and often, while turning over the advertising pages of magazines that contain advertisements for baby foods, with pictures of infants, she invariably holds the magazine inverted.

DR. C. D. WESCOTT—That this condition is sometimes a permanent one is illustrated by a case I observed during my student days. I saw a man writing the English language in such a way that I could not make it out. He explained to me, after seeing that I was interested, that he wrote upside down, and when the copy was reversed it looked and read just as English usually is written. He was a man of middle age, and still continued to write the inverted letters. I can confirm what Dr. Gradle has said with reference to the reverse writing of the insane. During my experience as assistant physician at Kankakee these observations were not infrequent.

DR. A. E. BULSON, Fort Wayne, Ind.—A case similar to the one reported came under my observation a few weeks ago. A salesman, in taking an order, wrote with the paper turned upside down, the writing from his position being upside down. I also noticed that in referring to his catalogue he invariably read with the bottom side up. As agents frequently do this in order to have the print so that the customer can read it, I thought nothing of it until I saw him write the order. On inquiry he told me that he had written this way ever since he was a child, and was unable to write in the ordinary way.

DR. ALBERT B. HALE—In reference to the remarks just made by Dr. Bulson, I should say that this is a trick of many traveling salesmen. They like to have the purchaser read the memorandum at once, and therefore write it upside down. It is an acquired trick, making figures, initials, etc. I have seen it done very well indeed. I regard it largely as acquired merely for business purposes. This would not apply, however, to such a case as Dr. Bulson cites.

Ichthyol in Prostatitis.

A. Freudenberg reports excellent results from the use of ichthyol suppositories in this distressing complaint. Forty cases are referred to, all chronic or in late stages of an acute attack, some of the blenorrhagic origin. He prescribes the following:

℞. Ammon. sulpho-ichthyol..... .3 to .6 or .7 gm.
Ol. theobrom.....2. to 2.5 gm.

M. ft. suppository. N. B.—No "hollow" suppositories. One suppository in the morning after defecation, and another on retiring at night. The effects were often rapid and surprising, the subjective disturbances—pain, pressure, and frequent, painful and slow urination—disappearing, and palpable decrease of the hypertrophy and inflammatory induration of the gland taking place.

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THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

SATURDAY, JANUARY 27, 1900.

TRANSMISSION OF TUBERCULOSIS.

Dr. Robison's article, published in this issue of THE JOURNAL, calls to mind the fact that there seems to be hardly any more fully accepted medical opinion than that of the direct reciprocal transmission of tuberculosis between man and cattle. And yet the direct evidence of the fact is, as Adami[1] says, singularly weak. It ought not to be so as regards the communicability of human tuberculosis to cattle, as experimentation is altogether practicable, though as to the transmission of bovine tuberculosis to man it is out of the question. What we need is careful clinical studies, not generalizations from casual or imperfect observation, however probable they may appear. Such statements as the following, taken from a recent report: "There are practically no cases of healthy herds where attended by patients of sanitary institutions. If the inspector looks first at the people on the farm and finds one or two of them that appear to have traces of tuberculosis, he can predict with absolute certainty that he will find the same disease among the cattle," and "the identity of animal and human tuberculosis first announced by Koch, but often disputed since, has at least been demonstrated beyond the possibility of a doubt," are probably true, but where are we to find the demonstration? Are we accepting the results of careful clinical observations and scientific experiments or merely the general clinical consensus of opinion from indefinite and uncriticized experience and observation? There is a certain reverence to general opinion as marked as that to authority, and we know the misleading possibilities of the latter. It would be well if every physician who is convinced that ingestion of milk or meat from tuberculous animals produces tuberculosis in man would give us the evidence in full that leads him to his conviction. If that were done, we could better answer such statements as the recent one of Moore[2], that there is no evidence of the transmission of bovine tuberculosis to man or that of man to cattle.

Can we not obtain from regions adjoining sanatoria, and elsewhere, careful studies that will furnish the incontestable facts, or what we can accept as approximately such, to settle these questions? Further, can we not have definite experimental proof of the identity of human and bovine tuberculosis? Thus far the literature has been too barren in this regard, though positive assertions are the rule. It is not that the danger is doubted, for there must be a basis for so general a conviction, but there should be a fuller possibility of giving reasons for the faith that is in us. There is certainly no lack of opportunity for investigation, and there are very few questions in medicine that are so universally assumed as solved with so little direct evidence of their solution. The need of further data as to the relative pathogenic actions of animal and human tuberculosis is admitted by those who, like Trudeau and Denison, have formally enumerated the problems of tuberculosis. They recognize the fact that we have still much to learn about the matter, but we fail to find a similar modesty in a large proportion of the publications of others who have written on the subject for professional or popular enlightenment.

The impression which is very often received is that our knowledge of the facts is complete and there is no need for further research. The fact is that we are probably only in the beginnings of our knowledge of many of the problems of this disease, and there is a possibility that many of our accepted beliefs will have to be modified, if they are not overthrown. At present we are working with only a vague and imperfect knowledge of many points, the one here discussed being apparently one of these, and less excusably so than many others that present greater difficulties in their investigation.

[1] THE JOURNAL, Dec. 16, 1899. [2] N. Y. Med. Jour., Sept. 2 and 9, 1899.

TREATMENT OF TYPHOID FEVER BY COLD BATHING.

Although water has been employed for therapeutic purposes more or less systematically for upward of one hundred years, it is only since the publication by Brand, in 1861, of his monograph on the "Hydrotherapy of Typhoid Fever," that the usefulness of this agency has received at all general recognition. Further time was required before the method of Brand was universally accepted, and this result was brought about only by the reduction in mortality that was demonstrated to take place as a result of its adoption. Brand recommended immersion of the typhoid patient for fifteen minutes in water at a temperature of 68 F., whenever the temperature, taken in the rectum every three hours, reached 102.2 F. This formula is, however, not an inflexible one, and its elements may be varied, in accordance with special conditions that may be present, or particular results that may be desired. Thus, the frequency of bathing may be diminished, the temperature of the water raised or lowered, the time of immersion lengthened or shortened, in accordance with the conditions present in the individual case. In general, however, the best results are obtained from a faithful adherence to the fundamental regulations.

The cold bath is not directed merely against the fever or the elevation of temperature—it is not simply an antithermic or an antipyretic measure; otherwise, the same results might be brought about by any of a large number of modern products of the laboratory capable of this effect. The bath, however, does this and much more besides. It influences, in fact, the entire course of the disease; it stimulates the circulatory—regulates and slows the heart, improves the pulse—the respiratory—slows and deepens the breathing—and the secretory functions—heightens metabolism generally, increases the secretion of urine—and those of the nervous system

—subdues headache, overcomes restlessness, clears the sensoria, induces sleep. The most important result of all, however, is the reduction in mortality. The death-rate from typhoid fever subjected to any or all other forms of treatment has long averaged from 18 to 20 per cent., while, in large numbers of cases submitted to the cold bath, it has averaged between 7 and 8 per cent., and there is striking agreement in this respect between the results obtained, not alone in Germany and on the Continent of Europe, but also in England, in Australia, and in the United States, in fact, wherever the cold-bath treatment has been faithfully and intelligently employed. To the statistics already published, Baumler[1] adds the results of observations made in the Medical Clinic at Freiburg from Oct. 1, 1876, to Sept. 1, 1899. During this time there were treated with cold baths 1019 patients—575 males, 444 females—suffering from typhoid fever, with 95 deaths (57—9.91 per cent. in males, 38—8.55 per cent. in females)—9.32 per cent. These figures include all cases, without reference to the severity of the attack, to the time of admission and of death with relation thereto, to the presence or absence of complications and sequelæ, and to the causes of death. Making allowance, however, for cases admitted moribund or with incurable complications, and for those in which death occurred from tuberculosis after recovery from typhoid fever, the mortality was only 7.9 per cent. —8.58 per cent. in males, 7.37 per cent. in females. These figures agree closely with those of Tripier and Bouveret in Lyons, of Osler in Baltimore, of Wilson in Philadelphia, and of Hare in Brisbane.

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ARTERIO-RENAL DISEASE IN EARLY LIFE.

Some of the statements made recently in these columns (p. 179), with regard to the occurrence of interstitial changes in the liver, particularly in young persons, are susceptible of general application to analogous changes in other tissues and organs. The danger from all conditions of this nature depends on the establishment of a vicious circle, in which hyperplasia of the interstitial tissue either takes place primarily or occurs as a result of previous destruction of parenchymatous tissue, and this in turn causes further destruction of parenchymatous elements, this process continuing until it reaches a degree that is incompatible with the continuance of life. It is likely, further—in fact it is the rule—that that same process may involve many organs and tissues contemporaneously or successively, though, as observation has shown, in varying degree. This fact would seem to indicate that the different organs exhibit differences in respect to their response to the same irritant, and it may be anticipated that a certain selectiveness of action, perhaps a certain specificity, may be looked for in this connection. In any event the changes that we are discussing are those that are in a general way responsible for physiologic senility, and which are exemplified in the degenerative process designated arterio-sclerosis; and it may be that, as Metschnikoff is recently reported to have stated, we shall be able to prolong life when we have acquired the ability of preventing the early or the excessive deposition of interstitial connective tissue or of causing its disappearance when once it has formed.

For the present at least, that degree of prophylaxis is possible that consists in the avoidance of those irritants that are known to give rise to the morbid process under consideration. It is a generally accepted fact that arterio-renal disease is not a common condition in the young, but recent clinical observation would seem to indicate that it is not so rare as it has hitherto been considered. In fact, it has even been encountered as a congenital condition. Perhaps it would be found oftener if it were more frequently looked for. On general principles one might suspect that the delicate tissues of the young would be more sensitive to irritating influences than the more mature and more resistant tissues of the adult; although children, on the other hand, are not, as a rule, so much exposed to the action of these irritants.

To the small number of cases on record in which chronic arterio-renal disease has developed in childhood, without evidence of previous acute disease of the kidneys, Brill and Libman[1] add another that presents, besides, other points of more than ordinary interest. The patient was a girl, 14 years old, who had always been weak and undersized. Dyspnea was easily induced. Menstruation had not appeared. The face and the cheek had been swollen a year before coming under observation. Cough and expectoration had been present for a short time. The only illness had been an attack of gastro-enteritis at the age of 6 months. There was no evidence of syphilis. A day following a fright the child was found paralyzed on the left side of the body, with rigidity, and some twitching in the affected parts. Headache was present with fever, and slight hemoptysis. The heart was enlarged, and systolic murmurs were heard at the apex and the right base, while the second sound was accentuated and at times duplicated. The radial arteries were tense, thickened, and tortuous. The urine contained albumin and hyaline and granular tube-casts. The condition of the patient grew gradually worse; signs of hemorrhagic infarction of the lungs, the spleen, and the superior mesenteric artery became evident; pericarditis developed; and death ensued after the lapse of some eight weeks. On post-mortem examination in addition to the infarction of the lungs and the cardiac hypertrophy, the aortic valves were found moderately atheromatous, and segments of the mitral valve slightly thickened. The aorta contained patches of atheroma, especially about the openings of the coronary arteries, and these vessels were markedly atheromatous. Patches of atheroma were present also on the endocardium, between the aortic and the mitral valves, and also on one cusp of the mitral valves. The kidneys were exceedingly small and red; the right weighed 59 grams, and was

[1] Deutsches Archiv. f. Klin. Med., B. lxvi, p. 21

[1] Jour. of Exp. Med., iv, 5, 6, 541.

9x4x3 cm. in size; the left weighed 34.5 grams, and was 6.5x3.5x2.5 cm. in size. Their capsules were adherent, the surface irregularly granular, the renal substance firm, the cortex narrow. While there was hemorrhage into the mesentery, no embolism nor thrombosis could be found in the mesenteric vessels, although the superior mesenteric artery was markedly atheromatous. The liver was enlarged, firm and congested, with an increase in its connective tissue. On microscopic examination the lungs exhibited brown induration, with increase in the interstitial connective tissue. The capsule of the liver was thickened, the capillaries of the organ dilated, and there was a little increase in the interstitial connective tissue. The liver was degenerated and pigmented. The hepatic veins were dilated and their walls thickened. The arteries exhibited a marked degree of obliterative inflammation. Areas apparently following the course of the hepatic artery were the seat of lime-deposits. The arteries of the spleen, also, were the seat of marked obliterative inflammation. Both kidneys were the seat of an intense interstitial inflammatory process. The intima of the coronary arteries was greatly thickened, and the seat of extensive calcareous deposits and necrosis, with fibroid metamorphosis of the media. The superior mesenteric artery exhibited irregular thickening of the intima and the media, with small calcareous deposits in the intima. Examination of the blood fourteen hours before death, and also of that from the heart after death, disclosed the presence of the staphylococcus albus, but no especial significance is attached to this, as the death-agony was prolonged. Two other children in the family, likewise, presented evidences of arterio-renal disease.

MEDICAL EDUCATION.

There is a tendency toward premature specialization in some of the schools of medicine in America, the result of better equipment of laboratories as well as the spirit of investigation that has been breathed into our youth from the universities of Germany. It is, however, a tendency to be modified, and to be criticised.

Investigation and original research is the soul of progress, and every medical school should offer the most ample facilities that its exchequer will permit, to encourage original progressive research work within its walls; but the student who is preparing himself to be a thorough, conscientious practitioner of medicine has all he can do to grasp the principles that form the basis of his studies. President Dwight, of Harvard Medical School, in a discussion of the "Position that Universities Should Take with Reference to Education[1]," Dec. 25, 1899, says: "We must look to it that the candidate for the degree of M.D. be not robbed of his time, none too long, for learning medicine as an art, by specially conducted excursions into abstract science."

President Eliot says that a university that is not a place of research will not long continue to be a good place for teaching. It is true that the stimulus that comes from the association with a professor who is himself actively engaged in original work is nearly always greater than that from a man who merely collects the material of other men. It is also true that work in laboratories in which active research is being conducted is more inspiring than work in laboratories that serve merely as class-rooms for a certain prescribed routine. If a student has a tendency toward investigation he should be given the opportunities afforded him by the university; but instead of being encouraged to produce unripe fruit in the ambitious twenties, and being left to wander in the mazes of technic and the intricacies of theoretic disputes, he should be trained to sharp, definite conscientious work that will enable him, when he is more mature, to draw ideas from the disassociated facts that are constantly being accumulated in the laboratories of this country. President Dwight says: "The born investigator (and no other is worth much trouble) no more needs encouragement to investigate than a fish does to swim."

The medical school, for its own fame, would much better equip research laboratories, pay an investigating professor an ample salary and provide him assistants for detail technique, than to force men of an investigating spirit to seek private laboratories and do independent work. But all this should be to save the time of the medical student, to add the latest results to the facts he must know, and to present them to him in the way that he can best grasp and put them into practical use.

As a means of instruction, training in research methods is slow and cumbersome, and our medical colleges are in danger of too extensively substituting this round-about training for more direct methods of instruction. A certain amount of training in research methods stimulates the perception and increases the power of self-guidance, but the student-physician can not afford to get his experience along these lines to the exclusion of others. He must get all that accumulated experience has to offer before he starts off to acquire knowledge on his own account: otherwise his education is a narrow, spindling structure, and his judgment dwarfed and immature.

CELERY AS A VEHICLE OF INFECTION.

The dangers of typhoid from truck-gardens, with their free use of fertilizers from all sources, has been often pointed out. A rather striking object-lesson is reported from one of the Eastern states where an epidemic of fever occurred in one of the state institutions. It was found that the disease could apparently be traced to the use of celery grown on some sewage-fertilized grounds, the practice of banking up the stalks making these plants specially adapted to receiving and holding the germs. As soon as the use of the plant was stopped the epidemic diminished, and finally ceased altogether. These facts indicate the need of a caution in using this popular vegetable, which, with its corrugated stems, etiolated by banking up with earth often saturated with fertilizers of one kind or another, and generally eaten raw, might

[1] Science, January 12.

very possibly carry the germs of disease. The danger is not great or we would hear more of it, but that it may exist occasionally, the above case seems to prove. It is not intended here to advise against the eating of celery, but only to suggest that it be well cleansed first, and to call the attention of physicians to what may be a possible cause of some rare cases of disease of obscure etiology.

THE ORIGINAL OF MULTIPLE LIPOMAS.

Many are the theories that have been advanced in regard to the origin of multiple lipomas. The relationship of some lipomas to the nervous system is shown both by clinical and anatomic observations. Askanazy[1] traced the development of multiple lipomas to lymph glands which were finally wholly replaced; this process could be followed clearly in the mesentery and in an anthracotic gland in the neck. The physiologic paradigm of this replacement is seen in the fatty transformation of the thymus and of bone marrow. The fact that in Askanazy's case death resulted from a sarcoma of the neck that had extended to the pharynx and to the thyroid recalls the declaration of Thomas Curling[2], in 1850, that lipomas of the neck depend in some way on disturbances of the thyroid functions.

THE CONJUNCTIVAL SAC AS PORTAL OF INFECTION.

From Römer's[3] experimental studies of infection from the conjunctival sac, we learn that in the case of the rabbit and the guinea-pig, the conjunctival sac is an extremely dangerous route of general infection, as dangerous as, if not more than, any and all other recognized routes; it is not necessary to produce any preliminary injury to the tissues, severe general infection may result from the introduction of microbes into the intact conjunctival sac, and in a large percentage of such cases the resulting septicemias progress more rapidly than when the germs are introduced into the subcutaneous tissue. The germs do not enter the general circulation by way of the conjunctiva itself; it remains protected by its anatomic structure and by being constantly bathed with tears. The resorptive activities of the nasal mucous membrane play the principal part in the general infection; Römer demonstrates, by means of histologic sections, that fine corpuscular elements, such as powdered carmin, introduced into the sac of the conjunctiva, reach the nose by way of the tear passages, and are then taken up by the epithelium of the nose and deposited in the submucous lymphatics. In general infection from the conjunctiva the nasal mucosa is the entrance point. His studies are of interest as to the mode of infection in various forms of acute meningitis. The nose has long been held as a probable route of entrance. As shown long ago by Key and Retzius, the lymphatics of the submucous tissue of the nose communicate with the dura and arachnoid by way of spaces in the sheaths of the olfactory nerves. Micro-organisms, which reach the lymph-vessels of the nose, have thence a straight road, so to speak, to the lymphatics of the brain, and it may be that the nose is reached from the conjunctiva more commonly than now believed. Römer emphasizes the fact that dust is of importance, especially in local infections of the conjunctiva, because it not only produces epithelial lesions, but under its influence the bacterial content of the conjunctival sac rises above the normal.

[1] Virchow's Archiv., 1899, 158, 413.
[2] Medico-Chirurgical Transactions, 1850, xxxiii, 103.
[3] Zeft. f. Hyg. u. Infektionskr., 1899, xxxii, 295.

MEDICAL EDUCATION IN INDIANA.

The State Board of Health of Indiana evidently intends to take a hand in the supervision of medical education in that state. At a recent session of the Board, as noted in our Indiana news, a resolution was adopted requiring each medical college to annually furnish a report of the number of students in attendance, the percentage of attendance of students on lectures, and other particulars bearing on the question of thoroughness of instruction and the qualifications of the graduates. It also concluded, according to the report given to the press, to make annual visits to each college to see that they are keeping up to the required standards. If this plan is carried out thoroughly, the medical colleges of Indiana ought to be forced up to a high standard of excellence. We are not informed as to the details of the legislation qualifying the State Board of Health, but it certainly has a comprehensive understanding as to its functions, and there must have been a liberal allowance of power allotted to it by law. Properly and judiciously exercised, such powers ought to be the cause of great benefits to the state, and this latest move is, we think, in the right direction. If the Board has no more than a merely advisory function in this supervision of medical education it will be possible for medical colleges to go their own way without regard to it, but the probability is that its influence will be felt. The power to judge of the "good repute" of any and every institution of medical education certainly ought to be effective within the jurisdiction of the Board. The medical colleges of Indiana are not that kind always ready to place obstacles in the way of progress toward the higher standard so earnestly sought after by the better men of our profession, and so we may expect to see them co-operate with the Board, and hence great good result.

RELATION BETWEEN MALARIAL INFECTION AND EPILEPSY.

It is recognized as an established clinical fact that acute infectious disease occurring in an epileptic has a tendency to suppress the convulsive seizures, at least temporarily; though these may subsequently recur with their original or even increased frequency and severity. It has been thought that malarial infection especially exerted a favorable influence on epilepsy, but a series of fourteen observations made by De Montyel[1], in the course of eleven years, would seem to demonstrate the contrary. In five cases of mild epilepsy, with slight attacks at long intervals, and with little mental impairment, the symptoms were aggravated in the sequence of attacks of intermittent fever, which themselves yielded readily enough to quinin. In three cases in which there had been no convulsive seizures for a number of years, the attacks returned under the influence of malarial infection. In the remaining six epileptic attacks occurred for the first time while the patient was suffering from malarial fever. Ir one of these the attacks oc-

[1] Revue de Médecine, Dec. 10, 1899, p. 921.

curred only in association with malarial infection, and in another they were worse under the same condition, although they occurred also independently. In a third, epilepsy developed during a second relapse of malarial fever, the attacks recurring and the patient remaining delirious after the malarial fever was cured. The patients in the remaining three were addicted to the use of alcohol, but this was considered merely a predisposing factor in one case, and the exciting factor in the other two, the malarial infection operating, however, as an aggravating influence. It should be added that all of the patients possessed a neuropathic predisposition.

MURDER AND SCIENCE.

A writer in the *Catholic World* for January, taking as his text a pamphlet already noticed in THE JOURNAL, makes a serious accusation against the medical profession. Under the caption "Murder in the Name of Science," he repeats the *suppressio veri* and *suggestio falsi* of the original with apparently no question as to its entire reliability. THE JOURNAL has already shown the malignant misrepresentation of the pamphlet in question, as regards the one instance where it could be sure of its identification of the article misquoted, and the refutation need not be repeated here. It showed how unscrupulous the author was in his perversion of facts, and what little reliance could be placed on the prejudiced statements of the humane association of antivivisectionists. It is unfortunate, however, that it has found a clerical believer to republish the libel in an influential denominational religious journal, and thus impose it still further on the credibility of the public. Physicians do not need to be told that reckless experiments on human subjects are universally condemned by the profession, and are only rarely ventured on by its less scrupulous members even in Europe. Here, however, we find the reverend gentleman repeating the calumny that it is practiced at wholesale there, and his readers will probably accept the statement implicitly. The two instances in this country referred to are the one already explained and another, hard to locate, as it represents the physicians of a hospital of one of our larger cities as inoculating twenty lepers with a still more loathsome and horrible disease. What hospital in a large city in this country could supply twenty lepers for such an experiment? As regards Dr. Berkley's experiments with thyroids, it is unfortunate that he made the slip of saying that death is invariably caused by even a moderate administration of an agent which, though not harmless, is yet not so actively toxic, and which has completely changed for the better the prognosis of one of the most repulsive forms of mental deficiency. That inaccuracy has been the text of these misrepresentations, and the case would probably never have been quoted without it. It should be said here, in justice to Father Searles, that he is evidently not an irrational antivivisectionist. His article is, on the other hand, rather a plea for the restriction of experiments to the lower animals; it is not the *corpora vili* he is concerned about, for he admits that they are ours "for legitimate use of this kind." His article gives no support for the antivivisectionists, but it is in every way reprehensible as taking up and repeating the slander sent out by them as a collateral aid in their attack on the medical profession. If he had only consulted his medical friends in whom he had confidence, assuming of course that he must have had such, or those whose character is such that neither he nor the general public can do otherwise than accept their testimony, he would have learned how unjustified and libelous is such an attack on an honorable profession.

CLUB PRACTICE—HOW SHALL WE MEET IT.

Our Canadian correspondent calls attention this week to the action of the Medical Society of Victoria in reference to lodge practice. It seems that the rapid increase of the various lodges and societies, whose main excuse for existence is supplying physicians and medicine to their members, has become so marked that some action is necessary to prevent the profession being made a mere tool of these societies. The action of the combined bodies brings matters to a focus, and the fight will probably be to the finish. It is certainly to be hoped so, at least. As if the free work now being done by the members of the medical profession in hospitals, clinics, dispensaries and among the deserving poor were not sufficient, these societies are demanding the right to treat physicians and their labor as commercial property to be used as a society may dictate, and pay what they see fit. This lodge business question is a growing one all over the country, and it is time that we recognize it as a question that will have to be met ere long. Whether they shall be compelled to submit to terms dictated by these combinations depends on physicians themselves. If they are contented to let matters take their course in this as they have done, they will soon find a serious problem on their hands. A transfer of the "Battle of the Clubs" to our shores, even over the border, is not a desirable consummation, but in some form or other we will probably see it come to pass. We have the advantage of the experience of our brethren in Great Britain and elsewhere, who have shown that where the medical profession shows a combined front to the evil it will win the fight. At present even we have a foretaste of what may come, not merely in the way of lodge practice and benefit societies, but also the attempted exploitation of our profession by speculative promoters and syndicates that attempt to control medical practice for their own ultimate profit. There have been notices of several proposed organizations that can hardly mean anything else than this. It is not to be admitted that this is going to be a normal phase of our social development, and as loyal to our professional brethren and to our own interests, we should each and every one of us do what we can to nip the evil in the bud. Mere individual action, however, will not be sufficient; what is needed is combined action and perfect organization in this as well as in other efforts. The question is already before us in its beginnings, and it is none too early to give the alarm.

OCCLUSION OF MESENTERIC VESSELS.

The difficulties in the way of an accurate diagnosis of intra-abdominal morbid conditions are often many, and sometimes insurmountable except through surgical intervention and ocular inspection, but an approximate degree of accuracy can often be reached from a careful consideration of all of the features present in the individual

case. Nausea, vomiting, and constipation, with a coated tongue, offensive breath and headache are common to many of these conditions, but it is rather their grouping and their association with other phenomena that can be considered to be at all distinctive. Pain is not always referred to its point of origin; fever will be present only when toxic substances are absorbed into the circulation; nausea, vomiting and constipation may be due to other causes than intestinal obstruction, and even this may be due to physiologic—pathologic—rather than mechanical causes; and tumidity may be either of gaseous or of solid origin. When these are elicited, the etiologic factors are of great significance for the diagnosis. A condition to which some attention has been called of late, and which, while not common, can scarcely be said to be rare, consists in occlusion of the mesenteric vessels—arteries or veins—by thrombosis or embolism. Such a condition may result from valvular disease of the heart, atheroma or inflammation of the vessels, arteriosclerosis, or adjacent inflammation. The symptoms consist principally in severe abdominal pain, vomiting, tympanites and signs of collapse. The bowels may be constipated, or there may be diarrhea with bloody stools. A tumor can sometimes be detected on palpation. Unless the effects of the vascular obstruction be speedily neutralized, ulceration or gangrene of the bowel will result. Death often occurs, although there is evidence that recovery may take place. The specimen from a case of hemorrhagic infarction of the small intestine with a fatal termination, was exhibited by Dr. Leon T. DeWald at a recent meeting of the New York Pathological Society. The patient was a drinking man, who presented symptoms of pulmonary emphysema and nephritis, and who complained of cramp-like pain in the epigastrium. Vomiting occurred frequently, the temperature rose to 103 F., and the pulse became small and wiry. After death the lungs were found congested, with a large hemorrhagic infarction at the base of the right. The heart was enlarged and dilated, and the aorta atheromatous and calcareous. The kidneys were enlarged and granular, and the right contained an infarct. The intestines were matted together by fibrinous adhesions, on separation of which a perforation was found in the ileum, about three feet above the ileocecal valve. The intestine for a distance of five inches on either side of the perforation was dark and gangrenous; the mucous membrane was softened; and the walls were dark and infiltrated with blood. The corresponding mesentery was in a similar condition and a thrombus was found in the supplying branch of the superior mesenteric artery.

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INNOCUOUS INSOMNIA?

It is said that certain distinguished men of the past and of the present time have been able to do extraordinary amounts of work on a minimum of sleep, the time used for that function ranging from six to four hours, or even less, according to the reports. The statements are popularly accepted as facts without question, and are also repeated in medical works. A recently published text-book on nervous diseases says that some few adults are able to get along with four or five hours of sleep, though the majority require eight or ten. It is a matter of medical as well as popular belief that men like Edison, Napoleon and others can do more work and endure more fatigue than the great mass of men, with only a little more than half as much sleep as is generally supposed to be required. This is a physical anomaly. There is no machine that can be so made as to do a maximum of work on a minimum of repair or rest, the work done by a watch, for instance, which seems continuous, is very little, only equivalent to the force used in winding it. Just how special samples of the human machine contrive to thus reverse physical laws is a difficult question, and perhaps its simplest solution is to say they do not do it, at least for any long continued period of time. There are very few matters in regard to which there is likely to be more self-deception than that as to the amount of sleep. It is not at all uncommon to have persons say they have not slept at all, when in fact they have only had a few brief interruptions to their accustomed ration of slumber. It is perhaps possible that Edison may sleep only four hours—if he says so himself he probably believes it—but if so he is a very rare exception, and we seriously doubt whether he keeps it up over extended periods. That endurance of loss of sleep for a time is pathologically possible, any insane asylum can give evidence, but the victims either wear themselves out or make up the loss by prolonged periods of comparative stupor. In the normal condition it is, however, extremely doubtful whether any one can do good work, either mental or physical, for any length of time without more than four or five hours of sleep in the aggregate twenty-four hours. When the nervous centers are past their period of greatest activity, as in old age, there is an apparent lessening of the need of sleep, but even old men require at least six hours, and very rarely if ever do well on less. In active maturity seven and eight are none too much for the average man. The recently reported proposition of university students in some western institutions, to reduce themselves to a minimum of sleep, is one of the cranky notions of the day and likely to be disastrous if seriously attempted. A lively distrust of the reported stories of the innocuous insomnia of prominent persons, that appears to thus influence their immature intellect, would be a salutary thing to encourage.

PERNICIOUS MALARIAL FEVER.

While perhaps typhoid fever is the more prevalent above and malarial fever below Mason and Dixon's line, the fact should not be lost sight of that cases of each may occur under circumstances amid which they would be least expected. With the information to be gained from examination of the blood as to the presence of plasmodia on the one hand, and of agglutination and sedimentation on the other, in conjunction with other more or less distinctive symptoms, there should be little room for error in the diagnosis of these two diseases. While such error is the more likely to occur from failure in observation, it must in fairness be admitted that the diagnosis may in some cases remain in doubt from a concurrence of unusual circumstances. Of all men the physician must ever be prepared for the unexpected, and he should constantly fortify himself against surprise. A forcible illustration of the necessity for such safeguards is afforded by a fatal case of pernicious malarial

fever, reported by Dr. A. A. Smith at a recent meeting of the Practitioners' Society in New York City, and it would be only charitable to forgive a failure to recognize an isolated case of that disease. Neither is it common for malarial fever to prove fatal there. The case in question is therefore of more than ordinary interest. The patient was a man 44 years old, who had lived in Florida and South Carolina for a dozen years, and had been for three months in New York. He had had an attack of malarial fever about a year previously, for which he had evidently been treated inadequately, although improvement resulted. During five weeks there had been daily chills followed by high fever, thirst, drowsiness and headache. The latter became continuous, and there was much pain in the back and the large muscles of the body, especially the calves of the legs. Toward the close there was delirium, nausea, and vomiting. The bowels were constipated. Quinin was given hypodermically a short time before death, but was entirely without effect. Numerous plasmodia of varied kind were found in the blood. On post-mortem examination the spleen was enlarged and softened. The cerebral meninges were edematous and turbid, and in places hemorrhagic. The kidneys presented evidences of interstitial inflammation. It would seem that this case was perhaps one of chronic malaria that had become pernicious from want of proper treatment, and the failure in this direction is difficult to understand except on the basis of the patient's indifference to his condition. It is scarcely possible that the nature of the case should have escaped recognition.

Medical News.

THE TOPEKA (Kan.) Board of Health has authorized the establishment of a detention hospital for "Cuban chickenpox" patients.

THE SCHOONER *Vreeland*, on January 18, was ordered into quarantine at Old Point Comfort, Va., owing to the existence of smallpox on board.

DR. WILLIAM DAVIS, St. Paul, Minn., for many years associate editor of the *Northwestern Lancet*, has resigned. Dr. Howard Lankester will be his successor.

ACCORDING TO the *Gazette Méd.*, Paris is on the point of bestowing on a certain street the name of Eugene Bouchut, in honor of his invention of intubation of the larynx.

A NEW medical monthly—the *Providence* (R. I.) *Medical Journal*, which began publication this month—has been received. It is published by the Providence Medical Association.

THE MEDICAL faculty at Heidelberg now admits women students on the same footing as men, if provided with the diploma of a German "gymnasium" or high school course.

TRAVELERS in Mexico will be interested in the efforts of the editor of *Anales de Oftalmologie*, Dr. Troncoso, to compel the railroads to have the eyes of their employees tested. There is nothing of the kind in force now.

OWING TO the existence of the plague in Asia, etc., orders have been given by the U. S. Treasury Department that hereafter a clear bill of health will be demanded from all vessels clearing from such ports, under a penalty of $5000.

JUDGE ARNOLD, of the common pleas court of Philadelphia, has handed down a decision to the effect that artificial coloring of oleomargarin is unlawful. According to this decision it is unlawful to add any hue to the product other than that which it may possess in making.

THE CITY Board of Health, New Orleans, has mandamused the city council with a view to securing the means necessary for carrying on the work of the Board during the current year. The council budgeted the Board for $13,000 only, though an appropriation of $22,209 has been asked for.

PARIS HAS appropriated $1780 for the annual support of a laboratory for the study of favus and tinea. Dr. Sabouraud has been appointed superintendent, and the *Gazette Méd.* states that he has also been charged with the surveillance of all the schools of Paris in respect to favus, tinea and cutaneous diseases in general.

THE GRAND jury has returned indictments against "Divine Healer" Jones of South Omaha, Neb., and Mrs. P. B. Yates of Tabor, Iowa, on the charge of being criminally responsible for the death of the latter's daughter at Council Bluffs, January 5. (See THE JOURNAL, p. 117.) The jury decided that the daughter died from neglect, the mother having refused to procure medical assistance.

TWO YEARS ago, the *Association des Dames Francaises* founded a hospital near Paris, in which the members of the society serve in turn as nurses, in order to be prepared to assist the surgeons and medical men in case of war. They are now making great efforts to send to the hospital already dispatched to the assistance of the wounded Boers, a consignment of concentrated milk, green vegetables and coffee, and four hundred dollars' worth of inexpensive artificial limbs.

THE EIGHT medical journals of Havana are rejoicing at the appointment of General Wood to be governor-general of Cuba, as a compliment to the profession and a guarantee that great things will be accomplished. The *Archivos de la Policlinica* pays a glowing tribute to the "higienizacion" already accomplished by "la intervencion Americana," and the suppression of the scandalous prostitution in the street "forced on the people by the Spanish colonial government."

IT HAS been agreed by the House Committee on Inter-State and Foreign Commerce, in Congress, to report favorably on the bill (see THE JOURNAL, p. 182) authorizing the appointment of five scientists to make an examination of the river water, in different localities, used for potable purposes. The Delaware River water will be examined, and it was hoped that the Schuylkill would also be placed on this list, but as it does not flow through more than one state, it will not be examined by the commission.

A CHAIR of intertropical pathology has been created at Havana and Dr. Juan Guitéras appointed to it. He is at present studying in Europe. The *Archivos de la Policlinica* congratulates the Havana faculty on "this brilliant and exceptional acquisition," and expresses its exalted appreciation of "the patriotic act of the Doctor in leaving his position in Philadelphia—the chair of pathologic anatomy at the University of Pennsylvania—to return to Cuba for our welfare and to work for medical culture."

KOCH HAS made the Institute for Infectious Diseases at Berlin quite well-known. He is still in the Dutch

West Indies, and a number of other changes in the staff are announced. Brieger, in charge of the clinical department, has resigned to accept the new chair of general therapeutics at the University, and Pfeffer, chief of the laboratory, for the chair of hygiene at Königsberg. Marx has also left to assist Ehrlich in the Institute of Experimental Therapy at Frankfurt. Dönitsch and Frosch, who have returned from their official study of the plague in Portugal, are to take the places vacated by Brieger and Pfeiffer. The Institute has commenced ten-day courses on the plague in a laboratory outside the city, open to physicians, nurses and bacteriologists who agree to place themselves at the disposal of the Government in case of the outbreak of the plague. The courses are free to those occupying any official position. Other bacteriologists pay fifty marks.

STUDY OF TROPICAL DISEASES.—A board of medical officers to consist of Assistant-Surgeons William J. Calvert and R. P. Strong, U. S. A., and Acting Assistant-Surgeon Joseph J. Curry, has been appointed to meet at one of the general hospitals in or near Manila, P. I., for the purpose of studying tropical diseases as they occur in the Philippine Islands. The Board will receive its instructions from the Surgeon-General of the U. S. Army, and will be under the immediate direction of the chief surgeon, Department of the Pacific.

CONCERNING THE PLAGUE.—Five cases and four deaths were reported officially from Honolulu, January 16, and the same number of cases with no deaths were reported from Manila during the same period. The official reports convey the following information: Santos, Brazil, 38 cases and 13 deaths, October 15 to December 23; Hongkong, China, 42 cases and 42 deaths, November 5 to December 7. Three deaths were reported from Kobe, Japan, December 20, and one case was reported from Nagasaki, December 9. Twelve cases and 9 deaths were reported from Osaka and Hioga, December 2 to 23.

NEBRASKA'S MEDICAL STANDARD.—The four-year clause of the Nebraska medical law has been sustained by the district court in that state. An applicant who presented a three-year diploma was refused a certificate in October last, by the medical board. He appealed to the Board of Health, consisting of the governor, attorney-general and superintendent of public instruction, and it overruled the decision of the medical board and ordered that a certificate be issued. The Lincoln Medical College, a four years' graded school, applied for an injunction in the district court at Lincoln on the ground that the proposed action was a direct violation of the medical statute. On the showing made, the injunction against the board was made permanent, thus upholding the right of the legislature to fix the standard of medical education for the state.

SMALLPOX IN INDIANA.—Dr. A. W. Brayton, Indianapolis, has recently returned from a visit to Clay City, Ind., where he went to investigate one of the epidemics of mild smallpox that are being heard of here and there throughout the country. The whole town has been exposed, and as the younger generation had not been vaccinated, the disease spread freely. Had it been of the usual severe northern type the mortality would have been fearful. It is now in the country round about, and will probably be epidemic at least till spring. It has already extended to Terre Haute, Ind., where compulsory vaccination has been "hung up," so to speak, for two years, by the delay of the supreme court, and the town will doubtless suffer to some extent, if not extensively. The local medical men are, however, wide awake to the needs of the situation, and will keep the disease in check so far as it is in their power. Dr. Brayton is inclined to think the disease will creep still farther north, and may cover a large portion of Indiana and adjoining states. Chicago, he thinks, will escape, as it is the best-vaccinated city in the country, with the possible exception of New York City.

NEW YORK.

THE CENTRAL section of the Long Island College Hospital in Brooklyn is about to be replaced with a four-story fire-proof edifice, to cost $150,000.

A BILL has been introduced into the legislature, by Senator Ambler, providing for the appointment of a staff of consulting physicians for the hospitals for the insane.

READERS of THE JOURNAL will recall a recent attempt to poison a family at Armonk, Westchester County, by putting Paris green in the well. The owner of the well has finally succeeded, with the aid of a detective, in running down the culprit and lodging him in jail.

A SUPPOSED CHARITY.

Assemblyman Harburger has introduced a resolution into the legislature calling for a committee of five members, residing within Greater New York, to investigate the affairs of the Gerry Society, and report to the legislature before its adjournment. He also purposes to introduce a bill cutting off the annual appropriation by the city of $30,000, claiming that this sum has been appropriated hitherto on the assumption that the Society was a charitable one, but that, in view of the recent decision of the court of appeals, that it is not a charitable institution, but merely has police powers, it is no longer entitled to this aid.

MONTEFIORE HOME FOR CHRONIC INVALIDS.

This home is located in a high and salubrious region of Westchester County, within forty miles of New York City, and is especially designed for patients with pulmonary tuberculosis. During the last year a laboratory was established for microscopic and bacteriologic work. Of the 67 inmates treated, 63 were consumptives, classified as follows: percipient cases, 26; advanced, 28; far advanced, 10. Of these 39 were discharged during the year, their condition being as follows: apparently cured, 14; improved, 18; unimproved, 6; died, 1. Of 38 inmates, 28 gained in weight, 4 lost, and 6 remained stationary. The highest gain was 26 pounds, the average gain 11, and the average loss 4¼ pounds. Of the 38, 1 was able to work regularly on the farm and in the garden, 16 were able to work at intervals, and 13 did not do any work. The property embraces 136 acres, and a fine new sanitarium, the cost of which is estimated at $200,000, is now in course of construction.

STATE HOSPITAL FOR CONSUMPTIVES.

A bill has been introduced in the legislature providing for the establishment of a state hospital for consumptives. It appropriates $200,000 and authorizes the Governor to appoint, with the consent of the Senate, a board of nine trustees; at least two of whom shall be physicians. The trustees will receive no compensation, but are to be allowed $600 each for traveling and incidental expenses. The board is required to report annually to the legislature as well as to the State Board of Charities, and the latter is to determine the amount of the appropriation required each year. The trustees are empowered to appoint the superintendent, who must be a properly qualified physician, not one of the trustees. All medical assistants and examining physicians are to be appointed by the trustees on the nomination of the superintendent; thus the latter is authorized to appoint all necessary employees, and fix their compensation. While pay patients will be received, preference must always be given to the indigent. All persons desiring free treatment must apply to the authorities having charge of the relief of the poor in the district in which they reside, who shall thereupon request the nearest examining physician to make an examination of the patient; and no person shall be admitted without the certificate of one of the examining physicians to the effect that the applicant is suffer-

ing from incipient pulmonary tuberculosis. Provision is also made for the free transportation of such applicants to the hospital, which it is proposed to have located in the Adirondack region.

New York City.

THE ANNUAL dinner of the New York Society of Alumni of the University of Pennsylvania was held at the Waldorf-Astoria Hotel on January 20.

IMMIGRANTS landed at the port of New York last year numbered 303,762. The total deportations of criminal insane, and otherwise undesirable immigrants, during the year, were 3535, a larger number than in any single year since 1893.

THERE IS in Gouverneur Hospital a poor woman, the mother of three children, who has just given birth to triplets. Two of the babies were boys, and one a girl, and their combined weight was ten pounds and six ounces. The mother and babies are doing well.

A PROFESSIONAL pin swallower, made uncomfortable and dyspeptic by his occupation, recently appealed to the surgeons at St. John's Hospital, Brooklyn, and the following indigestible articles were removed: 3 watch-chains, 2 nickel and 1 brass; 2 latch keys; 6 hairpins, 128 ordinary pins, 10 two and one-half-inch nails, and a ring with a stone in it.

NEW YORK POST-GRADUATE HOSPITAL.

The fifteenth annual report of the directors of the New York Post-Graduate Hospital shows that during the last year 2668 patients were treated in the wards, of whom 1354 were discharged as cured and 320 died. In the report the urgent need of the hospital for an ambulance service is dwelt on. The generosity of one of the ladies interested in the institution has provided sufficient amount for the purchase of one.

POISONING FROM COPPER URNS.

One day last week 180 of the employees of Bellevue Hospital became very ill, apparently from something eaten at the noonday meal. Inspection showed the eatables to be fresh and wholesome, and it is inferred that the poisoning arose from a neglect to properly clean out the large metallic coffee urns. All those taken sick recovered in a short time, with the exception of one man, whose life for a time seemed in danger.

DEATH CERTIFICATES.

The Society of Medical Jurisprudence having appointed a committee on apparent death, its chairman, Dr. H. J. Garrigues, has sent a communication to the Board of Health urging a radical change in the present method of certifying to deaths. It is an open secret that many physicians are in the habit of signing death certificates on the statements of relatives, friends or others, without having personally inspected the body, although possibly twenty-four hours or more have elapsed since their last professional visit. The communication was listened to with interest and it was afterward asserted that it was quite probable that this agitation of the subject would lead to an amendment of the Santiary Code in this particular. It was suggested by the committee that the chief signs of death should be enumerated on the blank certificate, and that the physician be required to indicate, by writing "Yes" or "No," the presence or absence of each of these signs. It was argued that it would not be enough to require the physician to state that he had personally inspected the body, for, such an inspection might be perfunctory. It was also suggested that an ordinance be passed making it illegal to expose a body to cold, or to use embalming fluids thereon or therein until death had been properly certified to by a legally qualified physician who had been in attendance on the deceased.

PENNSYLVANIA.

THE GOVERNOR has appointed the following as members of the Board of Medical Examiners: Henry Beates, Philadelphia; Hiram S. McConnell, New Brighton; and R. W. Ramsay, Chambersburg.

A CHILD of 14 years, of Reading, about four months ago was bitten by a water spaniel. The wound was cauterized, and as the animal showed no signs of being rabid nothing was thought of the matter until the second week in January, when alarming symptoms of hydrophobia developed and the girl died January 17.

ON JANUARY 17, Dr. J. H. Oyler, acting state veterinarian, was sent to Berrysburg, near Harrisburg, to examine a herd of cattle supposed to be suffering with tuberculosis. Six animals were found diseased and ordered killed. In another herd of 21 cattle examined, four were ordered killed.

Philadelphia.

AT THE annual meeting of the Alumni Association of the Medico-Chirurgical College, January 13, the following officers were elected: president, Morton P. Dickeson; secretary, S. C. Burns; treasurer, E. S. Gans.

AT THE Philadelphia Hospital, last year, the money taken from the pockets of supposed charity patients amounted to $733.74, and for the past eight years it was $3852.88. The inmate of this hospital who recently fell heir to $50,000 will be made to pay the city $300.

DURING the past week the University of Pennsylvania sent three representatives to attend the New England alumni banquet and reunion in Boston; they were Professors Simon Flexner, Hampton L. Carson and William R. Newbold.

PROF. WILLIAM OSLER of the Johns Hopkins University, addressed the students of the medical department of the University of Pennsylvania on the evening of January 18, on "John Locke As a Physician and Philosopher." After the address a reception was tendered Professor Osler at the University Club, by members of the William Pepper Medical Society.

DR. EDWARD MUSSEY HARTWELL, Boston, has given a series of lectures during the past week to students of the Philadelphia Normal School, on "Physical Culture" and Hygiene." Dr. Hartwell has made a special study of physical training in the schools of Germany and Sweden. At present he is at the head of the Boston Municipal Statistical Bureau.

ANOTHER thief has been victimizing physicians in this city during the past week. His special plan of deceiving was to call hurriedly at some physician's office and tell the people who met him at the door that the doctor sent him for his instruments, etc. for an emergency case. The man then pawns or sells them.

THERE will be no executive clemency shown the two men who, as previously noted in these columns, were recently convicted and sentenced to the penitentiary for violation of the oleomargarin laws and afterward endeavored to secure pardons from the president.

MORTALITY STATISTICS.

The number of deaths during the past week was 525, an increase of 21 over that of the previous week and a decrease of 61 over the corresponding week of last year. The principal causes were: apoplexy, 12; nephritis, 33; cancer, 16; tuberculosis, 56; diabetes, 1; heart disease, 47; hernia, 3; influenza, 4; pneumonia, 86; peritonitis, 4; appendicitis, 1; septicemia, 1; suicide, 3.

HOSPITAL FOR CONTAGIOUS DISEASES.

A meeting of the incorporators of the proposed pay hospital for contagious diseases was held during the past week. The following officers were elected: president, Hon. William N. Ashman; vice-president, Edwin G. Hamersly; recording secretary, Clara T. Dercum; corresponding secretary, Edwin Rosenthal; treasurer, J. Madison Taylor. Application was made to the court to change the name from the Health Protective Hospital to the "Pay Hospital for Contagious Diseases."

JEFFERSON ALUMNI.

The fourteenth annual meeting of the Alumni Association of Jefferson Medical College was held January 20. Dr. A. H. Hulshizer, of the State Board of Medical Examiners, presided. Dr. George M. Gould delivered the principal address, entitled "The Story of an Unknown Hero's Life." The following officers were elected for the ensuing year: president J. K. Weaver, Norristown; first vice-president, G. B. Dunmire; second vice-president, J. Van Buskirk; third vice-president, W. S. Stewart; fourth vice-president, T. E. Conrad; corresponding secretary, Thomas G. Ashton; recording secretary, Wilmer Kruzen; treasurer, W. M. Sweet.

MARYLAND.

SECOND MARYLAND HOSPITAL FOR THE INSANE.

The fourth annual report of this hospital (Springfield) has been published. The admissions were 27, total patients 206. Of these 5 were discharged as recovered, 1 on parole and 8 died. The death-rate, 3.88 per cent., is remarkably low, as many of the patients came from the city's poor-house, and were

broken-down alcoholics and syphilitics. It is attributed to the excellent hygienic arrangements and location as well as the dietary and treatment. Tuberculosis seems likely to be eliminated from the death-roll. The open-door treatment and employment of patients has been literally carried out, and no patient has had a key turned on him. Occupation, with the largest liberty compatible with the safety of the patient and other patients, is the rule. It is surprising, remarks Superintendent Joseph Clement Clarke, what good effects a few hours' work on the farm or the garden has on restless patients. The farm and garden patients take as much interest in the growing crops as employees. In addition to working daily in the garden, farm, ward, kitchen, laundry, dining-room, and tailor-shop, the patients have dug a ditch 8100 feet long, 2 feet wide and 3 feet deep for a water main, and have cut and husked 75 acres of corn, cleaned out the reservoir, and graded and made the roads and walks around the hospital. A new group of buildings on the block plan, for females, is now in course of construction and rapidly nearing completion. The demand on the state, however, is for a separate hospital for the colored insane, and Dr. Clarke points out the advantages offered for this at Springfield, with its abundant water-supply, natural drainage, the land being owned by the state, the water system being established and the electric plant already in operation.

Baltimore.

A BENEFIT for the Maryland General Hospital was given at the Zoo on the 17th, to raise funds to furnish supplies, etc., for the free wards.

TO THE Frick department of the Medical and Chirurgical Faculty's Library, 326 new books were added in 1899, making 1357 volumes in that collection. The number of readers was 4031.

SCHOOL INSPECTION.

Health Commissioner Charles H. Jones is inspecting the public schools. Inadequate air space is the most glaring defect so far found. In many buildings there is less than 70 cubic feet of air per pupil. In nearly all, except those recently constructed, there is also defective ventilation. Cloak-rooms are almost invariably absent. One school is said to be almost directly over a sewer, and when the windows are opened the sewer gas is noticeably present. Offensive odors are also noticed from wraps hanging on the walls of the class-rooms. Some of the schools are overcrowded while others have vacant rooms.

SANITARY PROPOSALS.

Health Commissioner Jones has proposed a change in death certificates so as to require a statement that the physician signing it has viewed the body. He does not consider it necessary that the physician shall indicate the presence or absence of certain signs of death, as has been proposed in New York City, and noted in another column. He proposes that the certificate shall be signed before anything is done which would cause pain or injury to a live body, as embalming, putting on ice, etc. So far as danger of burial before death is concerned, Dr. Jones has never known a case of the sort.

EYE, EAR, NOSE AND THROAT HOSPITAL.

The eighteenth annual report of the Baltimore Eye, Ear, Nose and Throat Charity Hospital shows increases in every department. During the last year, 4029 patients were treated and 13,280 visits made to the dispensary. Of the patients, 2321 were white, 1708 colored; 2599 had eye diseases, 808 throat and 622 ear diseases; 475 surgical operations were performed, 343 on the eye, 81 on the ear, and 51 on the throat and nose. In the eighteen years, 44,021 patients have been treated, 4958 surgical operations performed and 147,250 visits made to the dispensary. The hospital is chiefly dependent on voluntary contributions, and the rapid growth of its work since the new building was erected in 1898 leads to an appeal to the public for assistance.

MORTALITY STATISTICS.

The death-rate of this city, according to the annual report of the health commissioner for 1899, was 18.76 per 1000, against 19.19 in 1898. There were 153 deaths from typhoid fever. A hard fight was maintained against diphtheria, and the average cases per month were less than in 1898. One of the great nuisances to health is the milk from city stables. There are 450 of these. By a number of prosecutions 45 have been closed and the rest kept in fair condition. Imperfect surface drainage in the newly-acquired annex, two miles north and west of the old city limits, creates many nuisances.

MILK CONDITIONS.

Less milk is condemned by the inspectors than formerly. City Chemist Lehmann says the milk standard—12 per cent. of solids and 3 per cent. of fat—is too low, and a better one would be 14 and 4. An ordinary cow, well fed, will produce the ratio of 15 to 4½. Hence producers have a wide margin for dilution, five gallons of milk being made from four by dishonest dealers, it still passing the test. It does not follow, however, that milk not coming to the test has been adulterated; it may arise from poor feeding, as in slop-fed city cows. Dirt and filth in milk does not necessarily mean danger to health, in the absence of disease in the cow and disease or pus germs in her milk. In ideal dairies everything coming in contact with cows during milking is sterilized; the clothes of milkers are passed through a steam chest and all utensils sterilized, even the cow's udders.

ILLINOIS.

Chicago.

THE INITIAL number of the *Doctor's Magazine*, edited and published by Dr. George F. Butler, will appear February 1.

THE PUBLIC school inspectors examined 4537 pupils during the week, of whom 364 were excluded from school to prevent infection of other pupils.

AT A recent meeting of the city council, an ordinance was introduced providing for a commission to make arrangements with a number of existing hospitals for the care of emergency cases.

DR. J. G. HUIZINGA has resigned the professorship of ophthalmology at the Chicago Eye, Ear, Nose and Throat College, to accept a similar position at the Post-Graduate Medical School.

A SURGICAL SOCIETY has just been organized with the following charter members: Drs. Owen, Murphy, Bevan, Van Hook, Harris, Ferguson, McArthur, Steele, Allport, E. W. Andrews, Beck, Plummer, Frank, and Eisendrath.

THE TRUSTEES of the Wesley Hospital will place that institution under the control of the Deaconess' Society of the Methodist Episcopal Church, June 1. The Northwestern University Medical School will provide the hospital staff.

COOK COUNTY HOSPITAL STAFF.

At the annual meeting of the staff of Cook County Hospital, Dr. Denslow Lewis was elected president, and Dr. L. Blake Baldwin was elected secretary. The Executive Committee consists of Drs. Weller Van Hook, George F. Butler, A. I. Bouffleur, and the president and secretary, ex-officio.

MORTALITY STATISTICS.

The total mortality of the past week was 511, an excess of 30 over the preceding week, the increase being caused by deaths from bronchitis, pneumonia and diphtheria. There was but 1 death from influenza during the week, 39 less than the mortality of the corresponding period of last year. In the weekly bulletin, the health commissioner calls attention to the fact that the opening of the sanitary drainage canal will not materially affect the water-supply, as many sewers will continue to empty into the lake until the work of constructing the intercepting sewers is completed.

WISCONSIN.

A MEETING of the State Board of Medical Examiners will be held in February, in LaCrosse, for the convenience of physicians in the southwestern part of the state to register and obtain licenses.

Milwaukee.

SIGHT AND HEARING OF CHILDREN.

An examination into the condition of the sight and hearing of the children in the Milwaukee public schools has been instituted by Dr. H. V. Würdemann, by request of the Milwaukee School Board, under the direction and authority of the Board of Health. He has associated with him in this work Drs. Nelson M. Black, John S. Barnes and Charles Zimmermann. The general plan of the investigation consists in instructing the teachers by a series of addresses on the anatomy and physiology of the eye and ear necessary for such an investigation; the seating and lighting of school-rooms; the most common

defects and diseases of the eye, ear and nose, which are productive of poor sight and hearing, and instructions for examination of the eyes and ears. The statistical data for the investigation are obtained by a series of ten simple questions: 1. Does the pupil habitually suffer from inflamed lids and eyes? 3. Do the eyes and head habitually grow weary and painful after study? 4. Is the pupil probably "cross-eyed?" 5. Does the pupil complain of earache in either ear? 6. Does matter (pus) or a foul odor proceed from either ear? 7. Does the pupil fail to hear an ordinary voice at twenty feet in a quiet room? 8. Does the pupil fail to hear the tick of a good-sized watch at three feet with either ear in a quiet room? 9. Does the pupil fail to breathe properly through either nostril? 10. Is the pupil a habitual "mouth breather?" If an affirmative answer is found to any of these propositions, the pupil is given a card of warning of non-obligatory nature, advising that the child be taken to a reputable physician, and stating that pupils with eye or ear disease can not attain best results in school.

OHIO.

Cincinnati.

TRAINING SCHOOL FOR NURSES.

Considerable surprise is manifest over the statement that this school has been conducted by the trustees of the city hospital without warrant of law. Although the records have been searched by the trustees no authority has yet materialized. The annual cost of maintaining this branch of the hospital has been in the neighborhood of $25,000. The committee of trustees to which the question of legality was referred is of the opinion that the training school should be continued on a less expensive scale. Sixty nurses are employed at $25 a month, and it is stated that a reduction in the corps will be recommended at the next meeting of the board. The committee will also recommend that local applicants be given preference as those from other cities remain long enough to receive an education at the expense of the taxpayers, and leave the hospital when their services might be of value to the community.

INDIANA.

IT IS reported that two deaths from hydrophobia have occurred at Richmond.

MEDICAL COLLEGE AFFAIRS.

The State Board of Medical Registration and Examination held a semi-annual meeting January 15, at Indianapolis, and re-elected the following officers: president, J. C. Webster, Lafayette; vice-president, W. T. Gott, Crawfordsville; secretary, W. F. Curryer, Indianapolis; treasurer, James M. Dinnen, Fort Wayne, and W. A. Spurgeon, Muncie. A resolution was adopted by the Board requesting each medical college in the state to furnish, annually, the following information: The number of students in attendance during the college year; the per cent. of attendance at the lectures by each student; the number of lectures delivered by each teacher; the per cent. of attendance of each student at such lectures, and the number of students failing to pass the entrance examinations, with their addresses. The Board also concluded to hereafter pay an annual visit to every medical college in the state, for the purpose of ascertaining whether they are keeping up to the required standards.

MICHIGAN.

THE ANNUAL report of the St. Mary's Hospital, Saginaw, shows that 450 patients were treated in the institution during the past year. The total receipts were $11,065, and the expenditures $12,010, leaving a deficit of $945.

RESOLUTIONS ON ANTIVIVISECTION BILL.

At the meeting of the Wayne County Medical Society, January 4, in Detroit, Dr. H. O. Walker presented the following preambles and resolutions, which were adopted:

WHEREAS, It has come to the knowledge of this Society that a bill has again been introduced into Congress for the purpose of the prevention of cruelty to animals in the District of Columbia, and

WHEREAS, The real object of the bill is to prevent vivisection and aid in the passage of like bills in the several states. It is

Resolved, That every member of this Society sign an appeal against the passage of this bill, to be presented to Senator James McMillan, chairman of the Committee on the District of Columbia; and, further, it is

Resolved, That every member of this Society be requested to write a personal letter to each of the senators of this state and the representative of this district asking them not to vote for the passage of said bill.

MINNESOTA.

DR. J. H. DUNN, of Minneapolis, will go South to regain his health.

THE FIRST wing of the new City Hospital, Minneapolis, is being rapidly completed and will be ready for occupancy in the early spring.

DR. CHARLES MAYO, Rochester, has been appointed by the governor to succeed Dr. Wesbrook on the State Board of Health. Dr. Wesbrook will continue to do the laboratory work for the Board, at the University laboratory in Minneapolis.

THE NORTHWESTERN Hospital of Minneapolis, which has always had a visiting staff composed of women physicians, has changed its plan and appointed the following staff: surgeon, James E. Moore; physicians, H. H. Kimball, J. W. Bell, E. S. Stout and C. Nootnagel; assistant surgeons, Rollin E. Cutts and Cora V. Roberts; consulting surgeon, J. Clark Stewart; consulting gynecologist, Amos W. Abbott.

PACIFIC COAST.

SEVERAL mild cases of smallpox developed in Spokane, Wash., recently.

DR. S. B. LIMERICK has been appointed to the Seattle (Wash.) Board of Health, vice Dr. George Newlands.

DR. JOHN W. WAUGHOP, for many years superintendent of the Western Washington Hospital for the Insane, is now residing at Koloa on the Island of Kauai, H. I.

THIRTY-ONE applicants for license to practice in Washington were examined by the State Medical Examining Board at Tacoma, January 2.

DR. JOHN F. CALBREATH, of McMinnville, has been appointed superintendent of the Oregon Hospital for the Insane. Dr. D. A. Paine, the former superintendent, has resigned and will make a trip to Europe next year.

ASSISTANT ATTORNEY-GENERAL VANCE, of Washington, has rendered an opinion to the effect that any person can practice osteopathy in the state without holding a medical certificate, provided such practitioner does not affix "M.D." or "M.B." to his name, and does not prescribe drugs or medicines. He holds that osteopathy is nothing but a sort of massage treatment.

CANADA.

(From Our Regular Correspondent.)

TORONTO, Jan. 20, 1900.

A CASE of smallpox is reported from Montreal. It is thought the disease has been introduced from New Brunswick, where several cases exist.

DR. E. H. STAFFORD, first assistant physician, asylum for the insane, Toronto, has resigned his position and will recuperate his health in Bermuda.

REGARDING the smallpox outbreak in Essex County, Ontario, Dr. Bryce reports that four new families have been infected since December 23. All the old cases are convalescing rapidly, and so far no deaths are reported.

IN THE smallpox epidemic in Quebec, which started three months ago, 352 persons have recovered from the disease, 13 are still sick and 8 houses are now infected. No deaths have occurred.

DETECTIVE ROSE, for the Ontario Medical Council, had several citizens of Toronto arraigned in the public court last week charged with practicing medicine without the necessary qualifications. Most of them were "Christian Scientists."

THE ANNUAL concert of the Ontario Medical College for Women was held the 18th inst. Since the inception of this institution in 1883, 150 students have been trained and there are at present 30 in attendance.

THE MILITIA department has purchased 1500 emergency bandages for the wounded, one of which will be carried by each man of the second contingent, the other being kept at the base.

THE MEDICAL board appointed by the Dominion Government to inspect the transport steamer *Montezuma*, as announced in

THE JOURNAL last week, has advised the rejection of the vessel owing to the cases of typhoid occurring among its crew.

THE MONTREAL Maternity Hospital has just been given $15,000, Sir William Macdonald and Messrs. Ross and Angus contributing $5000 equally. Lord Strathcona, who has already given $10,000, promises another $1,000 if nine others will donate a similar amount.

IN CONNECTION with the outbreak of typhoid fever in Westmount, a suburb of Montreal, it is stated that a milk-dealer is confined in the Western Hospital there with the disease, contracted from the milk which he himself had supplied.

THE FOLLY of treating their own children by parents was aptly illustrated in Hamilton this week. A child 4 years old was attacked with convulsions, and the mother, who was lying ill in bed, instructed her husband to place it in a hot bath. The result was that it was so severely scalded that it died two or three hours later.

OF THE $30,000 indebtedness of the Victoria Hospital for Sick Children, Toronto, $25,000 has already been subscribed, largely through the generosity of the fraternal organizations throughout Ontario. It is expected that the balance will be made up by the end of February.

FOR INTIMIDATING the medical health officer of Toronto in connection with that officer's examination of the city's firemen, recently, a citizen was convicted in the assize court, but allowed to go on suspended sentence after his attorney had made a public apology to the health officer.

NURSING-AT-HOME MISSION.

The twelfth annual report of the Toronto Nursing-at-Home Mission shows that during the past year 374 women, 26 girls, 26 infants, 24 boys and 14 men were treated. Out of this number 38 were sent to the various hospitals, 30 deaths took place, and 7157 visits were made. All told, 2858 patients were treated and 3027 prescriptions issued. The work is carried on among all classes and conditions of people, regardless of race or creed.

A CANADIAN HOSPITAL SHIP, THE "MAPLE LEAF."

Major Napier Keefer, Toronto, of the Bengal Army, retired, has come forward with a project and the offer of $1000 toward the equipment and maintenance of a hospital ship for the Canadians now at and on their way to South Africa. He is of the opinion that if Canada could fit out and equip such a vessel, the gift to the Imperial authorities would be greatly appreciated. Canada will very soon have upward of 3000 men in the field, when the Strathcona Horse, which the Canadian High Commissioner, Lord Strathcona, has so patriotically offered to the Home Government at his own expense, shall have been enrolled and dispatched; and the sick and wounded from this force might be given a prior claim for admission in this hospital ship.

LODGE PRACTICE IN VICTORIA, B. C.

As announced in last week's JOURNAL, the physicians of Victoria have set their faces hard against lodge contract practice, but they still have the lodges to reckon with, and it will be interesting to follow the actions of the interested parties as to the outcome of the struggle. Following fast on the declaration of professional independence by our confrères in the West, comes the news that the representatives of some seventeen fraternal organizations in that city have held a mass meeting at which the doctors came in for much abuse, not unmixed with threats of what the lodges would do if the physicians did not come to time and mend the error of their ways. It was decided that an advertisement should be inserted in the provincial papers for two or more qualified physicians. The idea of the fraternal societies is to form cottage hospitals throughout the city and have their own special physicians paid by salary, whose further duty it shall be to attend only to the families of fraternals. (See also p. 242.)

SMALLPOX IN NEW BRUNSWICK.

The dread disease has made its appearance in and around Campbellton and Moncton, and there are now three provinces in Canada having centers for the spread of infection. The local Board of Health is arranging for a general vaccination, and as the sections in Quebec and New Brunswick infected are contiguous, and traversed by the Intercolonial Railway, every precaution will be taken to prevent the spread of the disease along the railway line. All employees on trains and at stations, whose duties bring them into relation with the traveling public, have been ordered to be vaccinated, and arrangements have been made for the disinfection of all passenger cars. It is thought that it would be a wise precaution to vaccinate all the members of the Second Canadian Contingent, as they will be passing through the infected districts on their journey to Halifax, whence they embark for Cape Town.

ONTARIO STATISTICS.

The death-rate for this province last year was a trifle over that for 1898. In 1899 there were 23,426 deaths reported to the Provincial Board of Health, making a percentage of 10.5, against 11 per 1000 for 1898. Consumption caused the death of more persons than all other contagious diseases put together, 2315 dying from tuberculosis alone. Deaths from the other contagious diseases were: scarlet fever, 214; diphtheria, 363; measles, 43; whooping-cough, 90; typhoid fever, 381. During December alone 99.75 per cent. of the population reported—the largest on record. This represented 746 municipalities, the total deaths for the month being 1843. Of these consumption was responsible for 157. Marriages appear to be on the increase in the province. During 1898 the total number was 15,293, an increase of 281 over the previous year. In Toronto alone there were 1696 marriages in 1898, or an increase of 195 over the previous year.

ROYAL VICTORIA HOSPITAL, MONTREAL.

The annual meeting of the governing board of this institution took place last week, the election of officers for the ensuing year resulting in the selection of the Hon. R. B. Angus as president. The report of the superintendent showed that during the past year 2537 patients have been admitted to the hospital. Of these 1545 were free patients, 656 public ward patients paid at the rate of 50 cents per day, and 336 private. The increase over the previous year has been 256. On Jan. 1, 1899, there were 133 patients remaining from 1898, and during the year 2543 have been discharged, of whom 1530 were well, 613 improved, 119 unimproved, 140 not treated, 111 died, and 157 remained on Dec. 31, 1899. Of the 111 deaths, 31 took place within forty-eight hours of admission, the death-rate for the year being 4.41 per cent. The highest number of patients in the hospital on any one day was 200 and the lowest 134. In the out-patient department there were 16,721 consultations, as against 14,681 for the previous year, the increase being attributed to the opening of the new laryngologic department. The medical consultations were 6228; surgical, 5218; eye and ear, 2685; nose and throat, 1527; and diseases of women, 1963. The ordinary income for the year was $113,892.71, the expenditure amounting to $94,851.64, the balance being applied toward the new out-patient department.

Correspondence.

Medical Practice in the Philippines.

MANILA, P. I., Dec. 12, 1899.

To the Editor:—This is a difficult place in which to put anything into literary form, one being in a sweat-bath most of the time, and having to stop every few minutes to wipe one's hands and face.

PRACTICE IN MANILA.

The old Spanish law, under which we are administering the civil government here, required the passing of an examination for dentists and veterinarians, but none for physicians, who were only required to have a diploma, to register and pay an annual tax of $50 to $150, according to supposed income, by which they were classified. There is no field here for American physicians, for several reasons. In the first place the fees are too small. I was called once to an American house where I had been attending the family, and found a native physician there, sent for in emergency by the servants. He withdrew as soon as I arrived, but I asked him what fee he expected. His reply was that the usual honorarium was *dos pesos*, equal to $1 in our money. He is a *mestizo* of good professional standing and education, a graduate of the University of Barcelona, Spain, in medicine, and yet he only expected $1, gold, for an emergency call to an American family. Among his own people

he would probably expect an average of 50 cents, Mexican, equal to 25 cents in gold, for each visit. In the next place, the people who pay for their medical service are well-to-do *mestizos*, and they prefer their own race, who speak both Spanish and Tagalog, and use remedies with which the people are familiar. There are plenty of such men here, who have been educated first at the local medical college, which is connected with the University of Manila, and have taken a supplementary degree in Spain. There are also several first-class English physicians here, who attend their own nationality as well as other foreigners, and have a considerable clientele among the wealthy natives. Several American physicians have tried to settle here during the last year; some after leaving the Army or Red Cross organization, others having come out specially for that purpose. With one or two exceptions they have failed to establish a practice and have gone home. Several of them told me that they could not do anything except to "fake it" among our soldiers, on venereal disease, and preferred to quit rather than do so.

A MEDICAL GATHERING.

As to what the medical men are doing here clinically, there is not much to say. There is no opportunity for meeting one another regularly, and we of the army are worked so continuously that we have no time in which to look each other up. We had a pleasant meeting on the hospital ship *Relief*, a short time ago, at the invitation of Major Perley, the surgeon in charge. A paper was read and discussed to some extent. This is the only occasion on which we have met for such purposes since the occupation.

HEALTH OF THE PHILIPPINES.

Manila is not an unhealthy city. It has a most excellent water-supply, the gift of one of the former Spanish Governors-General, who left a large private fortune for this purpose, requiring that the water should be free to all citizens. There are public hydrants in every street, even far out in the suburbs, and no one pays a cent for water obtained therefrom. The only water-rates are paid for service inside houses, and those who don't wish to have the service laid can employ Chinese water-carriers to fill their water-jars daily, carrying the water from the public hydrants. When this water is boiled and filtered, as is commonly done by Americans, it leaves nothing to be desired in this respect. Out on the lines, where the men have to drink what water they can get, there is much malarial and other water-borne affections; but in the city it is nearly always one's own fault if sickness comes, speaking generally. If the cases of wounds and injuries, venereal affections, and bowel troubles due to excess or carelessness in eating and drinking, were eliminated from the sick reports of the army, during the time when it lay here in Manila, there would have been but little left of the sick-lists. But we have had two armies of unseasoned recruits to deal with, and just as soon as the first army began to know what should be avoided to keep in good health, it had to go home to be mustered out, and the second one of recruits came to go through the same experience. On the lines the case is different, of course. Rough food, roughly prepared, poor water, and heat, prostrate many. Convalescence from any disease is very slow in this climate; and the shortest fever leaves the patient very weak for a long time.

NATURE OF THE FEVERS.

The fevers are not malarial in most cases, as quinin does not control them; but they usually correspond to the forms of continued fever which Manson treats in his "Tropical Diseases," under the title of "Unclassed Fevers of the Tropics." We have had a good deal of typhoid, and it has been of a severe type, and very fatal. One case now going on under my care in a woman, began four weeks ago with a temperature of 105.5 F. For three days I used quinin sulphate, bisulphate, and hydrochlorate in daily doses of 30 grains, given between 6 a.m. and 12 m., and found the temperature at 105.5 every evening. Then I dropped quinin and had a blood-test made, which showed a well-marked Widal reaction. Soon abdominal symptoms developed and the case settled down into regular typhoid, but today the fever remains at 100 minimum and 102 maximum, after more than four weeks of continued fever. There are good points about the case, however, which give me great faith in the ultimate recovery. There have been no mental symptoms, the tongue is always moist and clean, and the strength is well sustained on two quarts of milk a day. Whenever I check the number of stools by an opiate, the temperature immediately rises and goes to 104 F.

DHOBIE ITCH.

One form of skin disease has given us much trouble, the so-called "Dhobie Itch;" a ring-worm affection which prefers the crotch and the axillæ in most cases, and is very obstinate in the field. Patients in the city soon get rid of it by the help of local germicides, especially chrysarobin ointment, but when it is neglected, as must of necessity occur in the field, it often affects the cellular tissue below the skin and causes a severe cellulitis.

SYPHILIS NOT PREVALENT.

Syphilis, contrary to our expectations, is very seldom seen, but chancroids and chancroidal buboes are very common, and seem to be the prevailing form of venereal infection.

MORTALITY AMONG NATIVES.

Among the natives, the death-lists, which are published daily, show that most of the mortality occurs from convulsions—probably infantile—and beri-beri. There are sometimes 14 or 15 deaths daily from each of these, to 1 or 2 or 3 from any other cause. The natives suffer from *calentura*, which means any kind of fever, whenever a cool wind prevails, and they say themselves that when the north winds blow there is *mucho infirmidad*—much sickness.

In the army there have been three deaths which have been suspected to have been due to beri-beri; but this is doubtful, the disease being practically unknown here among Europeans or other white races. Multiple neuritis has been seen quite often among our men, but the particular form of neuritis named beri-beri is confined to the native population. In view of the outbreak a few years ago, in an insane asylum in Dublin, Ireland, we may expect to have it among our white prisoners in the local penitentiary, but it has not yet been seen there, which fact speaks well for the sanitary condition of the place.

Women and children do very well out here, in fact they have had less sickness proportionately, than any other class of our American population. This is partly explainable by the greater care taken by them as regards food, drink and exposure to the sun in the middle hours of the day.

This army has been magnificently and munificiently supplied with everything. There has been no breakdown in any department, and no want of anything essential to the care of the men, sick or well. The medical department has been highly praised by foreign officers visiting our hospitals. Captain S. S. Long, deputy assistant adjutant-general of the British Army, came here from Hongkong during the early operations, before the fall of Manila, and looked into every department of our service. On his return he published an article in the *Journal of the United Service Institution in India*, in which he said: "If the spirit of the troops was excellent, it was even surpassed by that of the medical branch, who, in spite of a defective transport and many other difficulties, always had their hospitals as complete and efficient as it was possible for human ingenuity to make them. It speaks well for the skill of the department that they were completely successful in a large number of cases of abdominal wounds." You will find Captain Long's article reprinted in full, in the issue for July, 1899, of the *Journal of the Military Service Institution*, published at Governor's Island, New York Harbor. You will see also that he was not generally complaisant or friendly in his criticisms of other departments, a fact which gives greater weight to his commendatory words concerning the medical service.

SAMUEL O. L. POTTER,
Major and Brigade Surgeon, U. S. V. Attending Surgeon.

Typhoid Fever and Leprosy.

NEW YORK CITY, Jan. 20, 1900.

To the Editor: Dr. Alfredo Garces, of Colombia, says: "In places where leprosy reigns it is necessary to avoid the quick changes of temperature which might stop perspiration; such are baths in very cold water, being tired, drafts of cold air when coming from a hot room, or when just awakened, or coming from a dance, or from the neighborhood of a baker's oven, or from the ironing board. Don't live in damp places, especially during confinement, or any other illness, for experience teaches

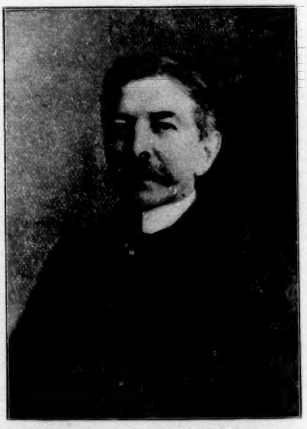
that after a confinement, women predisposed to the disease, acquire it easily, and the same is observed in convalescence from grave diseases, as *typhoid fever;* dysentery, etc. We have instances of *all* these circumstances, etc."

Any disease may be intercurrent in leprosy.

ALBERT S. ASHMEAD, M.D.

Deaths and Obituaries.

ABRAM H. WITMER, M.D., first assistant physician at the Government Hospital for the Insane, Washington, D. C., died in that institution January 20, from complications following an attack of pneumonia. He was born near Lancaster, Pa., in 1845, and was graduated from Jefferson Medical College in 1866. He then located in Mount Joy, Pa., and after a residence of eighteen months in that city, became assistant physician at the department of the insane of the Philadelphia almshouse. About the same time he engaged as a private teacher and demonstrator of anatomy at Jefferson Medical College, remaining until 1872. In 1876 he became third assistant physician in the Government Hospital, and in a short time was advanced to the position of second assistant physician. In 1885 he was promoted to the post of first assistant physician in charge of the department for females, which he held until his death. He acted as superintendent of the hospital many times



ABRAM H. WITMER, M.D.

in the absence of the late Dr. W. W. Godding, and possessed the entire confidence of his chief. In 1888, on account of ill health, he went to Europe, visiting the English asylums for the insane, and noting the methods in treating and caring for patients. During this time he acted as a delegate to the International Medical Congress at London. In 1890 he again represented the hospital at the International Congress, and spent six months on the Continent, visiting hospitals and asylums. Dr. Witmer was a member of the AMERICAN MEDICAL ASSOCIATION, the Medical Society of the District of Columbia and many others, and was on the staff of the Georgetown University Medical College.

LEVIN E. GOSLEE, M.D., superintendent of the Central Kentucky Lunatic Asylum, died on the 19th inst., at Lakeland, Ky. He had been ill for about a week, his death being due to an organic lesion of the heart. Dr. Goslee was 66 years of age and he had been superintendent of the asylum for three years. He was born at Versailles, Ky., and graduated at the University of Louisville, beginning the practice of medicine when 20 years of age. He practiced at Carrollton up to the time that he was appointed assistant physician at Lakeland, being promoted to the position of superintendent on the death of the former superintendent, Dr. Hugh McNary. He was a member of the Kentucky State, Mississippi Valley and AMERICAN MEDICAL associations and was a prominent Mason.

CHARLES W. NEFF, M.D., died in Baltimore, Md., January 17, aged 61 years. He was born in Frostburg, Md., graduated at Dickinson College, and took his M.D. degree in New York City in 1864. During the Civil War he was surgeon at hospitals in Annapolis and Baltimore, and since that had practiced in Baltimore.

JOSEPH C. MULHALL, M.D.—Fitting resolutions have been received, as passed by the faculty of Beaumont Hospital Medical College, St. Louis, Mo., and the St. Louis Medical Society, on the death of Dr. Mulhall, of whom an obituary was given in these columns last week.

W. L. ATLEE, M.D., Philadelphia, a graduate of the Jefferson Medical College, died suddenly January 14. During the Civil War he volunteered as hospital steward, and served in the 10th Regular Pennsylvania Reserve Volunteers. He was born in Lancaster in 1842.

E. C. STARNES, M.D., Asheville, N. C., a graduate of the Jefferson Medical College, class of 1888, aged 39 years, died at his home January 6. In 1890 he was elected city physician, and in 1895 county physician. During the late war he served as surgeon, being stationed at the hospital at Fort McPherson, Ga.

We also note the following deaths:

S. P. Bartleson, M.D., Clifton, Pa., January 16, aged 69 years.

A. A. Cooling, M.D., Wilton Iowa, January 11.

C. T. Duncan, M.D., Harrodsburg, Ky., January 13, aged 35 years.

F. V. Fravel, M.D., La Porte, Ind., January 7.

George Gladden, M.D., Homestead, Pa., of Bright's disease, January 18, aged 48 years.

M. W. Hall, M.D., Roxbury, Me., aged 51 years, January 10.

L. G. Lowe, M.D., Algiers, La., January 9, aged 31 years.

G. H. Malech, M.D., San Francisco, Cal., January 10.

W. B. Montgomery, M.D., Columbia, Ky., January 15, aged 59 years.

Albert D. Orwig, M.D., Toledo, Ohio, January 15, 42 years old.

J. H. Patton, M.D., Trenton, Mo., January 12, aged 56 years.

W. B. Price, M.D., New Berlin, Ill., January 6, 75 years of age.

J. E. Schroeder, M.D., South Brooklyn, N. Y., January 13, aged 45 years.

T. A. Snider, M.D., Sacramento, Cal., January 12, aged 74 years.

Leslie E. Tefft, M.D., Elgin, Ill., aged 62 years.

E. W. Terrell, M.D., Cullman, Ala., January 13.

J. E. Thompson, M.D., Salem, Mo., January 19, aged 75 years.

Jared Turner, M.D., San Jose, Cal., January 14, aged 75 years.

E. N. Wood, M.D., Buchanan, Va., aged 74 years.

Miscellany.

Malaria-Bearing Mosquito.—A writer in the *Indian Medical Gazette* states that the Anopheles or malarial-bearing mosquito was not to be found in the small pools near houses, as had been discovered by Ronald Ross, but that he was able to find them in rice fields surrounding one of the towns.

Permeability of Hypodermic Needles.—Belin writes to the *Polytechnique Méd.*, that he does not care to put his hypodermic needles to his mouth to blow out the drop or so remaining after an injection. He keeps a small rubber bulb and tube with the syringe, and after using the needle removes it, and fits the tube of the bulb over the end. As the bulb is squeezed all the fluid is expelled from the needle.

Examination Not Required to Make an Expert.—The fact that a statute may make it necessary for a person to be examined by a medical board in order to practice medicine legally, the court of criminal appeals of Texas holds, in Sebastian vs. State, does not render it necessary for a physician to

be examined by such board before he is qualified to testify as an expert, the statute having nothing to do with his qualification as an expert witness.

Contagion Through Telephone.—A medical committee was appointed in Paris, by the Post and Telegraph Department, to report on the danger of contagion of diseases from the use of public telephones. The committee unanimously asserted that no case of disease thus transmitted was on record, and that all possible danger would be suppressed by wiping the parts of the telephone most in use with a cloth moistened with carbolized water, spraying the walls of the cabinet with the same solution and airing them sufficiently. A circular of instructions to this effect has been sent to each telephone station.

Medical Study in Russia.—The faculty of the imperial medico-military Academy at St. Petersburg has unanimously decided, with the approval of the education and war departments, to in future admit graduates of the technical as well as the classic course in the preparatory schools. This step has also recently been taken in France, but not so unanimously as in Russia. The *Presse Med.* adds to this announcement that the St. Petersburg faculty even announce that they are convinced the technical training in modern languages, physico-mathematic sciences and drawing, is a better foundation for a medical education than the Greek and Latin classic course. It has been decided, however, that as prescriptions are always written in Latin in Russia, a certain knowledge of Latin is to be required at the preliminary examination.

Yellow Fever Precautions.—The sanitary authorities of Rio Janeiro have recently signed a treaty with the National Board of Health of the Argentine Republic requiring a medical certificate from every third-class passenger embarking at Rio and Santos for Argentine ports, between November 15 and May 15, with disinfection of clothing, baggage, and other quarantine regulations, appointing a committee of one Brazilian and one Argentine physician at each port to see that the measures of the treaty are enforced. It has aroused a storm of protests from the profession at Rio, as it practically admits that yellow fever is endemic at Rio and Santos, which they assert is untrue. Some of the most prominent medical authorities, in articles over their signatures in *O Brazil Médico* and in public meetings, insist that yellow fever is not endemic but can be traced every time to infection from without, and denounce the libel inflicted on their city by the "fatal convention."

Prizes of the Paris Academie de Medecine for 1902.—The conditions are simple, and described at length in the JOURNAL of April 3, 1897. The subjects are as follows: Academy prize of 1000 francs, annual, subject, "Toxins in Pathology." Alvarenga, 800 francs, best work in any branch of medicine. Amussat, 1000 francs, for work or research based simultaneously on anatomy and experimentation, which has realized or prepared the most important progress in surgery in the last three years. Baillarger, 2000 francs, best work on therapeutics or hospitalization of mental diseases in the past two years. Barbier, 2000 francs, absolute cure for an "incurable" disease. Boullard, 1200 francs, for best work or best results in treatment of mental diseases. Bourceret, 1200 francs, best work on circulation of the blood. Dupierris, 2300 francs, for best work on anesthesia or affections of the urinary passages. Capuron, 1000 francs, relations between fibrous tumors of the uterus and pregnancy. Chevillon, 1500 francs, best work on treatment of cancerous affections. Civrieux, 800 francs, diverse forms of dementia. Clarens, 400 francs, for best manuscript or printed work on hygiene. Daudet, 1000 francs, best work on incurable affections. Desportes, 1300 francs, for best work on practical medical therapeutics. Falret, 700 francs, somnambulism. Godard, 1000 francs, for best work on internal pathology. Herpin, 1200, quadrennial: abortive treatment of tetanus. T. Herpin, 3000 francs, for best work on epilepsy and mental diseases. Laborie, annual, 5000 francs, for the work that has materially advanced the science of surgery. Larrey, 500 francs, for best work on medical statistics. Lefevre, 1800 francs, "Melancholia." Lorquet, 300 francs, for best work on mental diseases. Meynot, 2600 francs, for best work on affections of the ear. Nativelle, 300 francs, for best research in regard to the extraction of the essential principle of some drug not previously isolated. Portal, 600 francs, study of experimental inoculation and contagion of cancer. Pourat, 700 francs, experimental research to elucidate the question of the immediate or remote destination of albuminous food elements. Saintour, 4400 francs, for best work in any branch of medicine. Stanski, 1400 francs, for demonstration of existence or non-existence of miasmatic contagion, by infection or contagion from a distance. Vernois, 700 francs, for best work on hygiene. The list also includes the great Audiffred prize of an annual income of $5000 for a specific for tuberculosis, unless awarded before 1902. The prizes offered for 1901 include annuals: Chevillon, Clarens, Desportes, Larrey, Lorquet, Nativelle and Vernois. The subject for the Academy prize for 1901 is partial epilepsy from the clinical and experimental standpoint; of the Capuron, rigidity of cervix during delivery not due to cancer or fibrous growths; Civrieux, rôle of alcohol in mental pathology; Daudet, best surgical methods of treating cancer of the breast. The Jacquemier, 1700 francs, is for the work on obstetrics published at least six months previously, that has realized an important progress, and the Godard, for the best work on internal pathology. The subject for the Louis, 3000 francs, is thyroid medication and the Meynot is for the best work on diseases of the eyes; the Portal, lesions of the nerve centers caused by tetanic toxin, and the Pourat, circulation of blood in the lungs.

Losses of Volunteer Troops During the Spanish War.—The adjutant-general of the army has recently issued a *statistical exhibit of strength of volunteer forces called into service during the war with Spain, with losses from all causes.* The losses include discharges on account of disability and deaths, the latter arranged under the headings: killed in action; died of wounds received in action; died of disease; accident, drowning, suicide and murder or homicide. The total number of volunteers accounted for on the muster rolls is 10,017 officers and 213,218 enlisted men; total 223,235. Of the officers, 18 were killed in action; 90 were wounded, 3 of whom died; 119 died of disease, 4 by accident, 1 by drowning, and 3 by suicide. Of the men, 4544 were discharged for disability; 190 were killed in action; 1189 were wounded in action and 78 of these died of their wounds; 3729 died of disease, 97 by accident, 21 by drowning, 11 by suicide and 30 by murder or homicide. Among the officers mustered in were 1010 general and staff officers, including 143 belonging to the medical department of the volunteers. The only casualty among these medical officers was 1 death from disease. Of the staff officers, 3 were killed, 1 belonging to the quartermaster's department, 1 to the subsistence department and 1 to the signal corps. The statistics of the line are arranged by regiments, and casualties among regimental medical officers are not shown.

The Twentieth Kansas and First Dakota regiments each lost 3 officers killed; The First Nebraska had 2 killed and 11 wounded, of whom 1 died. The enlisted men of this regiment suffered the heaviest battle casualties; killed 19, wounded 166, of whom 13 died. The Twentieth Kansas lost 19 enlisted men killed, and 11 died from 120 wounded. The First South Dakota had 20 killed and 4 deaths among 90 wounded. These casualties occurred in the Philippines. The First U. S. Volunteer Cavalry, the "Rough Riders," had 21 killed, and 3 deaths among 97 wounded in the attack on Santiago de Cuba.

The regiments that served in Cuba suffered most from disease. The Ninth Massachusetts lost 4 officers and 110 men; the Second Massachusetts lost 2 officers and 86 men; the First Illinois 84 men; the Thirty-fourth Michigan 1 officer and 79 men; the Seventy-first New York 2 officers and 77 men, and the Ninth U. S. Volunteer Infantry 3 officers and 73 men. On the other hand, the Twenty-second New York, a full regiment of 1351 officers and men, had no death from disease during its service. The Eighteenth Pennsylvania lost only 1 man from its strength of 893, and the First Massachusetts Volunteer Artillery, 1 man in its strength of 757. Three full regiments lost only 2 men each—the Second Pennsylvania, the Third New Jersey and the Seventh Illinois. The First and Eighth U. S. Volunteer Infantry lost each 3 men, and the Fourth New Jersey 4 men.

The largest number discharged from disability in any one regiment was 145 in the Twntieth Kansas. The Second Louisiana lost 122 and the First North Carolina 115 from this cause.

As an offset to this, however, several regiments had an excellent record in this respect. The First Vermont, Second Massachusetts and Fifth Pennsylvania lost no men by disability; the First and Second Wisconsin, First Kentucky and Thirty-fourth Michigan lost only 1 man each, and the Second Mississippi and Ninth Massachusetts and Second U. S. Volunteer Infantry only 2 men each.

Queries and Minor Notes.

UNIFORM PRACTICE LAWS.

IOWA CITY, IOWA, Jan. 15, 1900.

To the Editor:—I have been informed that the present congress will have presented before it a measure providing for a national board to look after the standing of medical schools throughout the country, and to bring up the standard of instruction, so that when a man graduated from such standard schools he would be entitled to practice anywhere in the United States. If this is not the exact nature of the measure can you give me any information about it. I was informed that the AMERICAN MEDICAL ASSOCIATION and other societies are pushing the matter. If you can advise me on the subject I will be greatly obliged. M. B.

ANSWER—There is no such matter pending in Congress, and no such law could be passed, operative in the several states. Congress is without that power. The Legislative Committee of the AMERICAN MEDICAL ASSOCIATION has decided to request the state delegates to secure such legislation in their respective states at the earliest opportunity.

BACTERIA AND THE MICROSCOPE.

GREENSBURG, KY., Jan. 15, 1900.

To the Editor:—Lately, conversing with a gentleman, he remarked that in all diseases of which bacteria were supposed to be the causal origin, without exception, the microscope revealed the pathogenic bacillus in them. I claimed that while that might be the rule, it, however, had its exceptions, as in some well-marked cases of enteric fever, diphtheria, and some other diseases of supposed bacterial origin, thus denying that bacteria, as pathogenic factors, were always and "invariably" found present in such cases. Will you please tell me whether I am correct as to these exceptions—exceptions, which if true, like Banquo's ghost, have refused to be "down," even at the most imperious mandate of the strongest microscopic searchlight. Respectfully, P. C. S.

ANSWER:—Our correspondent is probably correct. Aside from the disorders that are supposed to be of bacterial origin, and the bacteria of which have not been satisfactorily revealed, there are others of unquestioned and known microbic origin in which in some stages or conditions no bacteria are found. Such a one, for example, is diphtheria, which in the form of membranous rhinitis sometimes or at some stages shows no Klebs-Loeffler bacillus with the most careful technique in microscopic examination. It may be objected that such cases are not true diphtheria, but they occur sometimes in connection with or succeeding the most unquestionable forms of the disease, the Klebs-Loeffler bacillus and all. It does not seem necessary for a bacterial disease always to reveal the germ, it may possibly, in some cases, only exist long enough to elaborate the toxin and the disorder may continue without it. This appears to be a probable explanation of the facts of rabies, and possibly also of some cases or forms of tetanus and diphtheria. Unless one holds that the bacteriologic diagnosis is the only correct one in all cases, it would seem to be a broad assertion that the germ must always be revealed. One can not, however, on the other hand, assume that germs do not exist because they are not found.

THE INDEPENDENT MEDICAL COLLEGE AGAIN.

GEORGETOWN, TEXAS, Jan. 19, 1900

To the Editor:—We have some diplomas recorded in our district clerk's office here, from a school styled thus—*Collegium Medicinae Independentia*, Chicago, Ill., etc. The faculty is as follows: J. Armstrong, M.D.; Chas. M. Hooney, L.I.D.; Thos. A. Bland, L.L.D., M. D.; M. L. Reed, M. D.; A. B. Opecka, M. D.; J. F. Cook, M. D.; F. E. Legan, M. D.; J. E. Rallison, M. D.; H. Scott, M. D. Is such a school chartered by the State of Illinois, and, if so, is it recognized by the Association of American Medical Colleges, or by the AMERICAN MEDICAL ASSOCIATION? Fraternally, E. M. T.

ANSWER:—The charter of this "college" was revoked by the Cook County Circuit Court in 1899, on account of its being a fraudulent institution. For information as to the legal steps taken to eradicate this "diploma-mill," see THE JOURNAL of March 12, 1898, p. 630, and October 21, 1899, p. 1054.

The Public Service.

NATIONAL QUARANTINE FOR THE PHILIPPINES.

The following circular from the Division of Customs and Insular Affairs, War Department, was published January 9, 1900, by Major-General Miles to the army for the information and guidance of all concerned:

CIRCULAR NO. 35, DIVISION OF CUSTOMS AND INSULAR AFFAIRS.
WAR DEPARTMENT, WASHINGTON, Jan. 4, 1900.

The following order of the President relative to quarantine regulations for ports in the Philippine Islands, is hereby published for the information and guidance of all concerned:

EXECUTIVE MANSION, WASHINGTON, Jan. 3, 1900.

To prevent the introduction of epidemic disease, it is ordered that the provisions of the act of Congress approved February 15, 1893, entitled "An act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service," and all rules and regulations heretofore or hereafter prescribed by the Secretary of the Treasury under that act are to be given full force and effect in the Philippine Islands, in so far as they are applicable, and the following additional rules and regulations are hereby promulgated.

The examination in ports of the Philippine Islands of incoming and outgoing vessels and the necessary surveillance over their sanitary condition as well as of cargo, passengers, crew, and of all personal effects, is vested in and will be conducted by the Marine-Hospital Service, and medical officers of that service will be detailed by the Secretary of the Treasury as quarantine officers at the ports of Manila and Iloilo immediately, and at other ports in the Philippine Islands as soon as practicable or necessary.

Quarantine officers shall have authority over incoming vessels, their wharfage and anchorage, in so far as is necessary for the proper enforcement of the quarantine regulations, including vessels of the army transport service and non-combatant vessels of the navy.

Collectors of customs at ports of entry will not permit entry without quarantine certificates.

Any vessel leaving any port in the Philippine Islands for any port in the United States, or its dependencies, shall obtain a bill of health from the quarantine officer, when such officer is on duty; said bill of health to correspond to the consular bill of health now required by treasury regulations; and the bill of health shall not be given to an outgoing vessel unless all quarantine regulations have been complied with. At ports where no medical officer is detailed the bills of health will be signed by the collector of customs or other officer to whom such duty has been legally delegated. Special regulations relating to the bills of health to be obtained by vessels of the U. S. Navy will be promulgated by the Secretary of the Treasury.

The medical officer detailed under this order as quarantine officer at the port of Manila shall be the chief quarantine officer for the Philippine Islands. It shall be his duty to make the assignments and removals from the service in the Philippines (subject to the approval of the Secretary of the Treasury), and he shall authorize necessary expenditures, under such regulations as the Secretary of the Treasury may prescribe.

The regulations for the government of the Marine-Hospital Service shall, so far as practicable, have force and effect in the management of the quarantine service in the Philippine Islands.

The expenses of the quarantine service will be charged against the revenue of the islands, and a sum of not to exceed three hundred thousand dollars ($300,000) in each fiscal year is hereby set aside from the revenues collected in said islands for this purpose The expenses shall be paid therefrom upon the certificate of a detailed quarantine officer and upon the approval of the chief quarantine officer for the Philippine Islands.

The chief quarantine officer shall render a report on the last day of each month to the Supervising Surgeon-General of the Marine-Hospital Service, who will issue to him necessary instructions.

The epidemic fund will be reimbursed from the revenues of the islands for the cost of disinfecting appliances and materials ordered to be forwarded to the islands prior to the date of this order.

[Signed] WILLIAM MCKINLEY.

This order to be duly proclaimed and enforced at ports in the Philippine Islands.

[Signed] ELIHU ROOT, Secretary of War.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, War Department, Washington, D. C., from January 5 to January 11, 1900, inclusive.

Peter J. A. Cleary, lieut.-col., deputy surg.-gen., U. S. A., from Fort McPherson, Ga., to Vancouver Barracks, Wash., for duty as post surgeon and as chief surgeon, Department of the Columbia.

John Ryan Devereux, acting asst.-surgeon, from Fort Warren, Mass., to Washington, D. C., for annulment of contract.

David J. Johnson, acting asst.-surgeon, from Fort Slocum, N. Y., to Fort Warren, Mass.

Richard W. Johnson, major, surgeon, U. S. A., leave of absence granted.

Henry S. Kilbourne, major, surgeon, U. S. A. now on duty in New York City, N. Y., as medical superintendent of transports, is relieved from further duty at Madison Barracks, N. Y.

Edward Lyon, Jr., acting asst.-surgeon, on the expiration of his present leave to report for duty at Fort Schuyler, N. Y.

John H. Macready, acting asst.-surgeon, from the Division of Cuba to the Department of California.

Daniel C. Moor, acting asst.-surgeon, from New York City, N. Y., to Toledo, Ohio, for annulment of contract.

Robert A. Seale, acting asst.-surgeon, previous orders directing him to proceed from Holly Springs, Miss., to San Francisco, Cal., revoked.

Hugh L. Taylor, acting asst.-surgeon, from Fort Douglas, Utah, to Waco, Texas, for annulment of contract.

Elmer S. Tenny, acting asst.-surgeon, from Winchester, N. H., to duty at Fort Douglas, Utah.

William J. Wakeman, captain, asst.-surgeon, U. S. A., from duty as attending surgeon and examiner of recruits at Philadelphia, Pa., to Fort Thomas, Ky.

Timothy E. Wilcox, major, surgeon, U. S. A., from Fort Schuyler, N. Y., to Columbus Barracks, Ohio.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending January 13, 1900.

Asst.-Surgeon R. W. Plummer, detached from the *New Orleans* and ordered to the *Petrel* and also to the Cavite Naval Station.

Asst.-Surgeon D. G. Beebe, detached from the *Bennington* and ordered to the *Petrel*.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the 7 days ending January 11, 1900.

Surgeon H. W. Austin, to report at Washington, D. C., for special temporary duty; to rejoin station at Philadelphia, Pa.

Surgeon L. L. Williams, granted leave of absence for ten days.

P. A. Surgeon G. F. Vaughan, detailed to represent the service at the meeting of the National Pure Food and Drug Congress at Washington, D. C., March 7, 1900.

P. A. Surgeon H. D. Geddings, detailed to represent the service at the meeting of the National Pure Food and Drug Congress at Washington, D. C., March 7, 1900.

P. A. Surgeon M. J. Rosenau, detailed as delegate to the 13th session of the International Congress of Medicine to be held in Paris, France, August 2-9, 1900; detailed to represent the service at the meeting of the National Pure Food and Drug Congress at Washington, D. C., March 7, 1900.

Asst.-Surgeon H. B. Parker, granted leave of absence for 30 days.

Asst.-Surgeon L. D. Fricks, detailed to represent the service at the meeting of the National Pure Food and Drug Congress, at Washington, D. C., March 7, 1900.

Asst.-Surgeon W. C. Billings, detailed to represent the service at the meeting of the National Pure Food and Drug Congress at Washington, D. C., March 7, 1900.

Acting Asst.-Surgeon J. C. Rodman, granted leave of absence for four days.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended January 12, 1900.

SMALLPOX—UNITED STATES.

Georgia: Brunswick, Dec. 22 to Jan. 4, 6 cases.
Illinois: Cairo, Dec. 30 to Jan. 6, 17 cases, 1 death.
Indiana: Evansville, Dec. 22 to Jan. 6, 8 cases.
Louisiana: New Orleans, Dec. 28 to Jan. 6, 19 cases, 1 death.
Massachusetts, Boston, Sept. 3 to Dec. 29, 37 cases, 4 deaths.
Nebraska: Omaha, Dec. 26 to Jan. 6, 3 cases.
North Carolina: Charlotte, Dec. 1 to 31, 2 cases.
Ohio: Cincinnati, Dec. 28 to Jan. 6, 3 cases; Hamilton, Dec. 28 to Jan. 6, 1 case; Youngstown, Dec. 28 to Jan. 6, 1 case.
Oklahoma: Shawnee, Dec. 27, 12 cases; Oklahoma City, Dec. 27, 14 cases; Yukon, Dec. 27, 4 cases.
Pennsylvania: Pittsburg, Dec. 28 to Jan. 6, 1 case.
Utah: Salt Lake City, Dec. 22 to Jan. 6, 10 cases.
Virginia: Portsmouth, Dec. 22 to Jan. 6, 4 cases, 4 deaths.

SMALLPOX—FOREIGN.

Austria: Budapest, Dec. 17 to 24, 1 case.
Belgium: Antwerp, Dec. 8 to 16, 4 cases, 4 deaths.
Bohemia: Prague, Dec. 8 to 23, 48 cases.
Brazil: Rio de Janeiro, Nov. 20 to Dec. 1, 133 cases, 94 deaths.
Egypt: Cairo, Nov. 18 to Dec. 2, 2 deaths.
England: London, Dec. 8 to 16, 1 death.
Greece: Athens, Dec. 8 to 16, 5 cases, 1 death.
India: Bombay, Nov. 20 to Dec. 5, 25 deaths.
Mexico: Chihuahua, Dec. 23 to 30, 13 deaths; Vera Cruz, Dec. 21 to 28, 1 death.
Russia: Moscow, Dec. 2 to 16, 9 cases, 1 death; Odessa, Dec. 16 to 25, 6 cases, 2 deaths; St. Petersburg, Dec. 2 to 16, 31 cases, 5 deaths; Warsaw, Nov. 30 to Dec. 6, 2 deaths.
Spain: Corunna, Dec. 8 to 23, 3 cases, 1 death; Madrid, Dec. 2 to 16, 3 deaths.
Straits Settlements: Singapore, Nov. 4 to 16, 4 deaths.
Turkey: Constantinople, Dec. 13 to 23, 1 death; Smyrna, Dec. 10 to 17, 2 cases.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Nov. 17 to Dec. 1, 10 deaths.
Cuba: Havana, Dec. 22 to 30, 18 cases, 3 deaths.

CHOLERA.

Brazil: Rio de Janeiro, Nov. 17 to Dec. 1, 10 deaths.
Cuba: Havana, Dec. 22 to 30, 18 cases, 3 deaths.

PLAGUE—UNITED STATES.

Hawaii: Honolulu, Dec. 25, 3 cases, 2 deaths.

PLAGUE—FOREIGN.

Brazil: Santos, Oct. 15 to Dec. 9, 37 cases, 11 deaths.
China: Hongkong, Nov. 16 to 25, 12 cases, 12 deaths.
India: Bombay, Nov. 28 to Dec. 12, 305 deaths; Kurrachee, Nov. 25 to Dec. 9, 6 cases, 4 deaths.
Japan: Formosa, Tamsui, Oct. 17 to Nov. 28, 36 cases, 6 deaths; Kobe, Dec. 7, 1 death; Osaka and Hiogo, Nov. 25 to Dec. 2, 3 cases, 2 deaths.
Madagascar: Tamatave, Nov. 11 to Dec. 3, 10 cases, 7 deaths.

CHANGE OF ADDRESS.

Allen, T. G., from Aurora, Ill., to 338 E. 57th, Chicago.
Barker, E. S., from 718 S. Halsted to 245 LaSalle Ave., Chicago.
Crume, G. P., from Earl Park, Ind., to 503 7th St., Minneapolis, Minn.
Ehmer, J. W., from 154 E. 25th, Chicago to Northwestern University Medical School.
French, G. M., from Malden, Mass., to Suncook, N. H.
Forrester, Jos., from 814 Sassafras St., Erie, Pa., to Butler, Pa.
Hillebrand, H. J., from 799 W. Wrightwood Ave. to 863 Armitage, Chicago.
Hughes, G. M., from 241 N. 18th St., to 1831 Chestnut St., Philadelphia, Pa.
Johnstown, W. W., from Chicago Heights to Cameron, Ill.
Michener, A., from Marshall, Mich., to State Home, Geneva, Ill.
McMeekin, R. J., from Akron to 814 Genesee Ave., Saginaw, Mich.
McCall, N. J., from Twining to Elkton, Mich.
Ormsby, O. C., from Logan, Utah, to Pocatello, Idaho.
Pettyjohn, J., from Humboldt, Tenn., to Commercial Hotel, Augusta, Ga.
Piper, E. D., from Waukegan, Ill., to 2116 W. Monroe St, Chicago.
Runyon, J. P., from Pine Bluff, to Little Rock, Ark.
Reed, R. C. Stockton, from SantaFe Springs to 209 S. Olive St., Los Angeles, Cal.
Smith, A. M. B., from 720 Adams to 879 Jackson Boul., Chicago.
Seymour, W. F., from Reedsburg, Wis., to 357 LaSalle Ave., Chicago, Ill.
Sutphin, P. C., from Hardyville to Greenburg, Ky.
Smith, N. M., from 315 E. 5th to 600 E. Grand Ave., Des Moines, Iowa.
Stehman, H. B., from Chicago, Ill., to 752 Colorado, Pasadena, Cal.
Small, H. E., from Chicago to Academy of Music, Sterling, Ill.
Simpson, W. B., from 1312 Canal to 604 Carondelet, New Orleans, La.
Schilling, F. W., from Kent, to Louisville, Ohio.
Vedeler, C., from 618 S. 11th St., to 1029 W. 7th Ave., Denver, Colo.
Womack, C. W., from Chapel Hill, to Tullahoma, Tenn.
Wallace, T. A., from 6658 Wentworth Ave. to 170 E. 79th, Chicago.

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MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

The qualifications for membership require that the applicant be a member, in good standing, of a state or local medical society entitled to send delegates to the annual meeting of the AMERICAN MEDICAL ASSOCIATION. A list of these societies will be sent on request. Applications must be accompanied with a certificate showing that the applicant is a member of a recognized society, and should be sent with the annual dues—five dollars—to the treasurer, Dr. Henry P. Newman, 100 Washington Street, Chicago. Members receive the JOURNAL free. Subscribers to the JOURNAL may become members of the ASSOCIATION without expense if they are members of medical societies recognized by the ASSOCIATION, and those desiring to have their names transferred from the subscription to the membership list should send certificates as above, with a receipt for their subscription to the JOURNAL, covering the current fiscal year.

FISCAL YEAR.

The fiscal year of the AMERICAN MEDICAL ASSOCIATION is from January 1 to December 31; and the annual dues paid by a new member cover only the fiscal year, no matter at what time of year the membership is obtained. Those who pay their dues and join the ASSOCIATION at the annual meeting in June, for instance, pay only for the fiscal year which ends with the December following, and the annual dues for the following fiscal year are payable the succeeding January, at which time the treasurer sends a statement to each member. Such members, however, are entitled to the JOURNAL for the full year, even though the membership be not continued.

PAPERS READ AT THE ANNUAL MEETING.

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